






Deloitte.



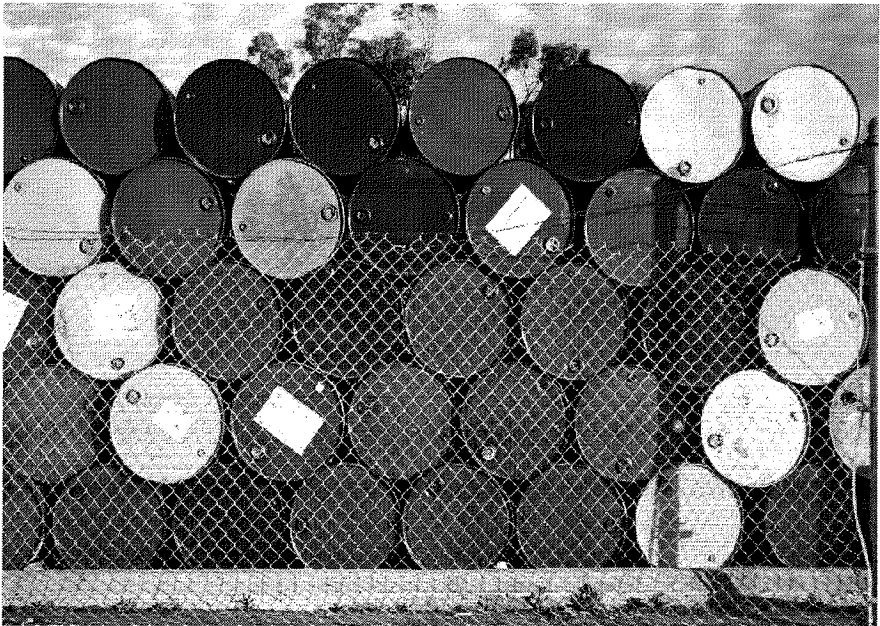
Project Pipelines
Case Studies
February 2018

Executive Summary

Description	 <p>The National Infrastructure Construction Schedule is a public repository of major infrastructure project information which includes projects from all Australian jurisdictions and at all three levels of government.</p>	 <p>Capital Intentions Plan provides a view on projected infrastructure spending across the central government, local governments and the private sector until 2025.</p>	 <p>The National Infrastructure and Construction Pipeline provides details of planned public and private sector infrastructure and construction investment over the next ten years with a focus on the next 5 years.</p>	 <p>The Infrastructure Ontario Pipeline provides detailed information regarding the renewal of public services and infrastructure assets</p>	 <p>The Global Infrastructure Project Pipeline provides early stage information on public infrastructure projects.</p>
Jurisdiction	Federal, State/Territory, and Local Government/Council	Central and Local Governments, Private Sector	Central Government, Regional Governments, Local Authorities and Private Sector	Ontario	International Governments
Number of Projects	147	~ 6000	694	130	231
Publishing Authority	Australian Governments	National Infrastructure Unit	HM Treasury Infrastructure and Projects Authority	Infrastructure Ontario	G20 – Global Infrastructure Hub
Frequency	Quarterly or in 10 days if there is a major public announcement	Yearly	Annually	As projects are identified and assigned to Infrastructure Ontario by the Ministry of Infrastructure	Updated by the project's relevant government agency
Timeline	2007 - 2027	2009 - 2025	2016 - 2021	N/A	TBD

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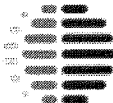

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Context

Case Studies Overview

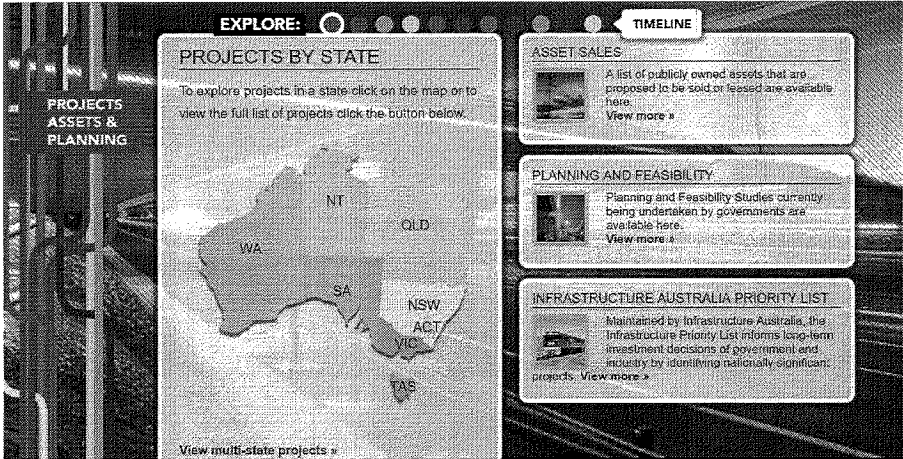
The case studies within this document provide an overview of selected pipelines across a variety of dimensions. Aspects of the case studies could be used to help develop the Canadian National Project Pipeline. The pipelines chosen represent three different types of pipelines (national, multi-jurisdiction and procurement) and use a variety of guiding frameworks which possess similarities and differences to the other frameworks reviewed herein.

Case Studies Included		Guiding Framework	
<div>National Pipelines</div> <div> <div>NICS</div> <div>  <div>NATIONAL INFRASTRUCTURE UNIT</div> </div> <div>  <div>Infrastructure and Projects Authority</div> </div> </div>		Overview	<ul style="list-style-type: none"> Description Jurisdiction Number of Projects Publishing Authority Frequency of Updates Timeline
	<div>Multi-Jurisdiction Pipelines</div> <div>  <div>Global Infrastructure Hub</div> </div>	Pipeline Characteristics	<ul style="list-style-type: none"> Sectors Covered Project Stages Criteria for Adding/Remaining Analysis of Projects
	<div>Procurement Pipelines</div> <div>  <div>Ontario Infrastructure Ontario</div> </div>	Project Details	<ul style="list-style-type: none"> Screenshot of Project Highlight of what information is included for each project
		Glossary	<ul style="list-style-type: none"> An explanation of the terms used in the project pipeline

Case Study: Australia

Guiding Framework: Australia

Overview

Description	<p>The National Infrastructure Construction Schedule (NICS) is Australia’s infrastructure project pipeline.</p> <p>The NICS is a public repository of major infrastructure project information which includes projects from all Australian jurisdictions and at all three levels of government. Specifically the pipeline provides information on the following:</p> <ol style="list-style-type: none"> 1. Future infrastructure projects which have received a public funding commitment 2. Infrastructure projects on Infrastructure Australia’s national priority list 3. Infrastructure projects for which planning and/or feasibility studies are being undertaken by one of the various levels of governments 4. Current public assets which will be brought to market 	
Jurisdiction	Federal, State/Territory, and Local Government/Council	
Number of Projects	147	
Publishing Authority	Australian Governments	
Frequency	Quarterly or in 10 days if there is a major public announcement	
Timeline	2007 - 2027	

Website Link: <https://www.nics.gov.au/>

Guiding Framework: Australia

Pipeline Characteristics

Criteria For Adding / Removing Projects

Added

Projects are added to the pipeline when the project's jurisdiction submits the project's information to the pipeline, it is a voluntary process on behalf of the jurisdiction. While the pipeline has suggested guidelines for the infrastructure projects that are submitted by the various Australian jurisdictions projects which do not meet these guidelines may be included on the list if the jurisdiction requests it. The project guidelines are:

- Large States: > \$50 million
- Small States/Territories, Local Councils: > \$20 million

Removed

Projects are removed when they are complete or at the request of the jurisdiction which is providing the information regarding the project.

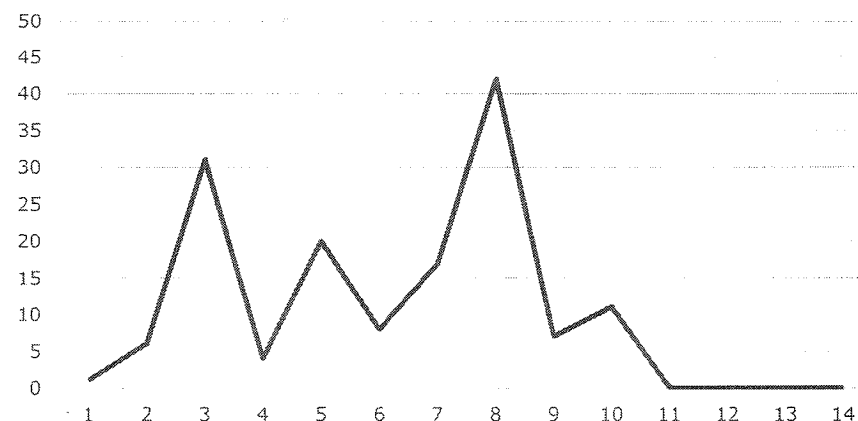
Infrastructure Sectors Covered

- | | | |
|-------------------------------------|--|--|
| • Transport, postal and warehousing | • Arts and recreation services | • Public administration and safety |
| • Construction | • Administrative and support services | • Electricity, gas, water, and waste service |
| • Health care and social assistance | • Information media and telecommunications | • Other |
| • Education and training | | |

Project Stages

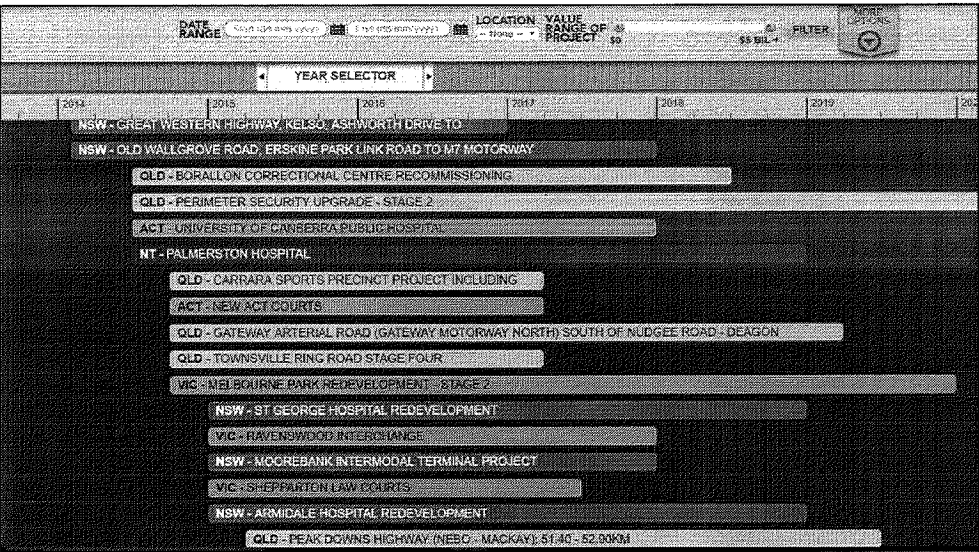
- | | | |
|---------------------------------------|----------------------|------------------|
| • Committed, no Financial Commitment | • Feasibility | • Postponed |
| • Committed, beyond Forward Estimates | • Planning | • Identification |
| • Committed, within Forward Estimates | • Approvals | • Scoping |
| | • Tender | • Concept |
| | • Under Construction | • Design |
| | • Completed | |

Number of Projects per Stage¹



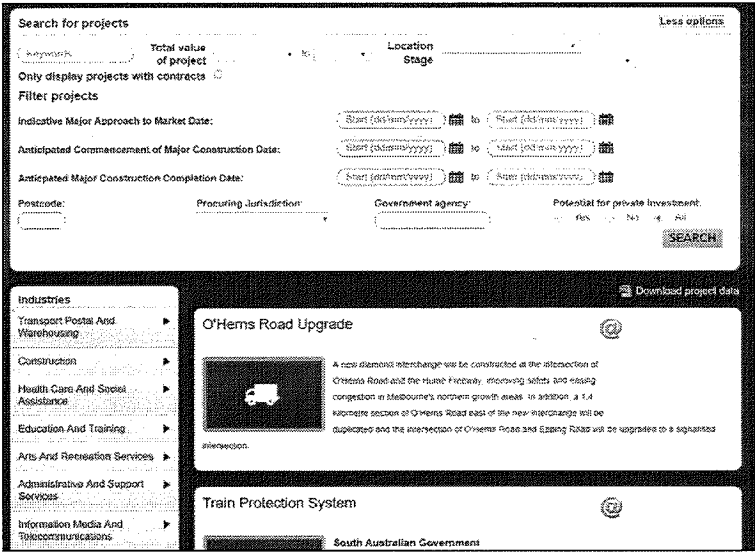
Guiding Framework: Australia

Pipeline Characteristics - Screenshots



Pipeline Timeline¹

The timeline shows all of the projects on the pipeline. Each bar illustrates the start date and projected end date as well as the specific jurisdiction and project name. Additional projects can be accessed using the timeline slider or the various filters at the top of the timeline. Selecting a project on the timeline brings the user to the specific project's information page.



Project Pipeline²

The pipeline provides a brief project description for each project included on the pipeline. The filters included at the top and left of the screenshot allow the user to filter the projects on the pipeline by a variety of categories including industry, project value, location, stage, and potential for private investment. Selecting a project on the pipeline brings the user to the specific project's information page.

¹ Source: <https://www.nics.gov.au/Timeline>
² Source: <https://www.nics.gov.au/Project>

Guiding Framework: Australia

Project Details

Program Overview

- Project Name
- Procuring Jurisdiction
- Stage
- Potential for Private Financing
- Value of Project

General Information

- Project description
- Location
- Postcode
- Government Agency
- Project Funding source

Contact Information

- Contact Name
- Project Contact Address
- Website
- Contact Phone
- Contact Email

Sydney Metro - North West, formerly - North West Rail Link
New South Wales Government

UNDER CONSTRUCTION

Potential for Private investment
Value of project Greater than \$5B

TENDER
Q3 (JUL-SEP) 2013

CONSTRUCTION START
2014

CONSTRUCTION END
2019

The North West Rail Link is a priority rail infrastructure project for the NSW Government.

The new rapid transit rail link will connect Sydney's booming North West region and is the city's biggest transport infrastructure project since the construction of the Sydney Harbour Bridge almost a century ago.

Eight new railway stations are proposed at: Cherrybrook, Castle Hill, Snowground, Norwest, Bella Vista, Kellyville, Rouse Hill and Gudgegong Road.

Also planned are 4,000 commuter car parking spaces.

The rail link includes 15km of twin tunnels between Bella Vista and Epping, a 4km skytrain viaduct and the conversion of the existing Epping to Chatswood rail link to the new generation single deck system.

More information at: www.northwestrail.com.au

Or you can follow this link for an interactive journey on the North West Rail Link: <http://northwestrail.interactivetour.com.au/>

NSW 2155

Government agency - Transport for NSW

Project Funding source - New South Wales Government

Major industry: Transport postal & warehousing

Major procurement method: Public Private Partnership (PPP)

Next key date: 2019

Project contracts: 3 contracts available

For more information contact:
John Rudd - Deputy Project Director
Delivery
Level 7, 12 Castlereagh Street
Sydney NSW 2000

<http://nsw.transport.nsw.gov.au/>
Phone: +61 2 655 6181
info@northwestrail.com.au

Timeline

- Tender
- Construction Start
- Construction End

Project Characteristics

- Major Industry
- Major Procurement Method
- Next Key Date
- Project Contracts

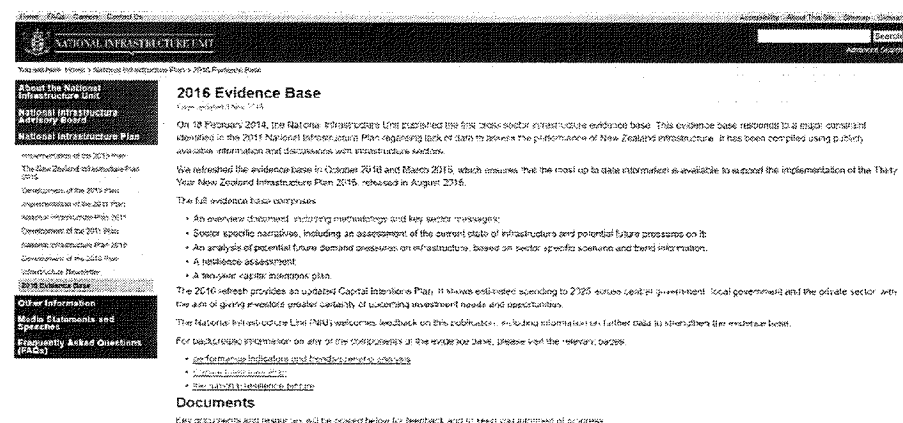
Screenshot of the information provided by the Australian Pipeline (NICS) for each Project¹

¹ Source: <https://www.nics.gov.au/Project/Details?ProjectId=5fa1769f-fde7-4b71-b4f2-16011fbaf274>

Case Study: New Zealand

Guiding Framework: New Zealand Overview

Description	Capital Intentions Plan provides a view on projected infrastructure spending across the central government, local governments and the private sector until 2025. The Capital Intentions Plan aims to provide greater visibility to the business community, particularly the infrastructure and construction sectors, on the potential upcoming infrastructure investment commitments and opportunities. Inclusion of a project on the Capital Intentions Plan does not mean that the project has been funded or approved, that it will definitely proceed or that it will proceed as indicated in the Capital Intentions Plan. The Capital Intentions Plan represents a best estimate at the point in time it was published based on the verification of information from Central Agencies' Treasury submissions on their investment commitments and intentions, local government/council's long-term investment plans and thirty year infrastructure strategies, and private sector annual reports and websites.
Jurisdiction	Central and Local Governments, Private Sector
Number of Projects	Central Government: 218 Local Government: 5836 Private Sector: 45
Publishing Authority	National Infrastructure Unit
Frequency	Yearly (Ideally)
Timeline	2009 - 2025



Website Link: <http://www.infrastructure.govt.nz/plans/evidencebase>

Guiding Framework: New Zealand Pipeline Characteristics

Criteria For Adding / Removing Projects

Added

Projects are added to the pipeline according to the three different sources from which the information on the pipeline is drawn. Central government projects are added every year based on voluntary reporting from the various central government departments. Private Sector information is updated annually based on the annual report produced and publically released by the company. The local government data is updated based on the long-term infrastructure plans and strategies which are updated and published every three years.

Outside of these, the pipeline also has the following guidelines for projects:

- Over \$1 million
- Project begins before 2025

Removed

Projects are removed from the pipeline when they are complete or when there is a change in the jurisdiction's infrastructure prioritization (e.g., new government takes power).

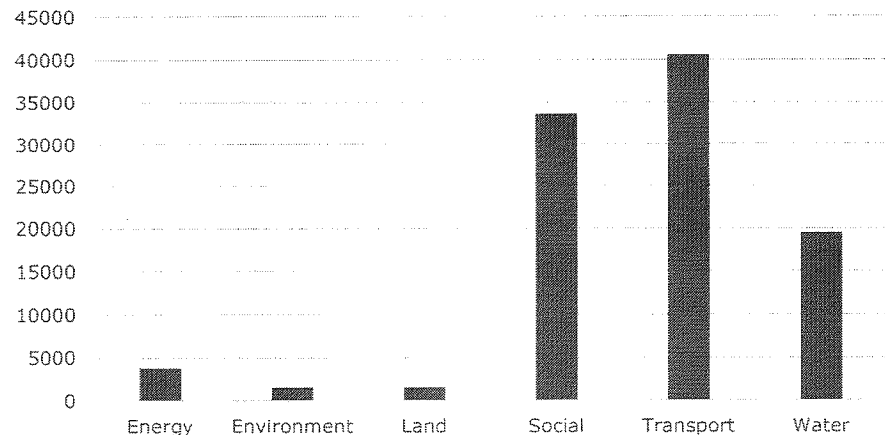
Infrastructure Sectors Covered

- | | | |
|--|---|---|
| <ul style="list-style-type: none"> • Energy • Electricity • Hydro • Gas • Minerals • Wind • Environment • Coastal Protection • Environment • Flood Protection • Solid Waste | <ul style="list-style-type: none"> • Land • Social • Community • Construction • Cultural • Earthquake • Education – Schooling • Education – Tertiary • Health • Housing • Justice and Security | <ul style="list-style-type: none"> • Property • Sports and Recreation • Transport • Air • Rail • Roading • Sea • Water • Stormwater • Waste Water • Water Supply |
|--|---|---|

Project Stages

- | | | |
|--|---|----------|
| <ul style="list-style-type: none"> • Close • Implement • Initiate | <ul style="list-style-type: none"> • Pre-project • Start-up • Blank (no stage) | recorded |
|--|---|----------|

Total Cost of Projects by Sector (NZD in M)¹



¹ Source: Evidence Base 2016: Infrastructure Capital Intentions Plan Project Data Released 21 Oct 2016, <http://www.infrastructure.govt.nz/plan/evidencebase>

Guiding Framework: New Zealand Project Details: Central Governments

Central Government Capital Intentions																			NATIONAL INFRASTRUCTURE UNIT		
Inclusion of a project does not mean that it has been funded or approved, will proceed, or that if it does proceed, it will be the scale and timeframe indicated in this report. It is however, the best available picture at this particular point in time.																					
Sect	Sub Sect	Agency Name	Sub-Agency (applicable)	Work ID	Project Name	Project Description	Project Type	Region	Position Lifecycle	Cost To (NZD \$)	Estimated Whole of Cost (NZD \$M)	Start Date	Planned End Date	Procurement	Agency / Portfolio Programme	Asset Class 1	Asset Class 2	Asset Class 3			
4	Social	Construction	Internal Affairs, Department of	0001252	Modernisation of Wharf - incl. boat haul	Modernisation and reconstruction of the wharf at the Port of Auckland, including the construction of a cost effective redevelopment boat haul overtopping area, if additional funding is received.	Keep the Business Running	Chatham Islands	Implement	53.26	53.26	10/1/2016	12/28/2017		N/A	Other Assets	Non-Residential Assets				
	Social	Construction	Ministry of Business Innovation & Employment	0001170	Extension of 'Warm Up New Zealand' (VUNZ) Healthy H	The 'Warm Up New Zealand' Healthy Homes extension programme will deliver insulation retrofits to more than 50,000 low income households, particularly families with children and high health needs, who stand to benefit most from having insulation installed in their homes. In all cases, homeowners will be able to receive retrofits for free. A contribution may be sought from landlords with eligible tenants.	Grow the Business	All of New Zealand	Implement	100.00	100.00	7/1/2016	6/28/2015		N/A	Residential Building					
5	Social	Construction	Primary Industries, Ministry for	0000331	National Biocontainment Laboratory Project (NBLP)	NBLP's bio containment laboratory at Wallaceville is an essential part of New Zealand's biosecurity system. The high level physical security of the laboratory is required to ensure staff safety and to prevent the escape of high risk infectious organisms. It is the only high security facility of its type in New Zealand.	Keep the Business Running	All of New Zealand	Implement	59.10	444.34	7/1/2014	6/30/2015	1. Fletcher Construction - multi-step procurement process 2. Merit & Co - one-step procurement process 3. Rider Levett Bucknall Ltd - one-step procurement methodology	N/A	Non-residential Building					
6	Social	Construction	Social Development, Ministry of	0000343	HQAP - Head Office Accommodation Project (56 The T	Fit-out of new Head Office accommodation and relocation of all staff.	Keep the Business Running	Wellington	Implement	28.80	143.51	10/1/2012	10/1/2015	1. Fletcher Construction - multi-step procurement process 2. Merit & Co - one-step procurement process 3. Rider Levett Bucknall Ltd - one-step procurement methodology 4. The Building Intelligence Group - one-step procurement methodology	N/A	Furniture & Fittings	Other Assets				
7	Social	Construction	Parliamentary Service	0001204	Parliament Executive Wing (Beehive) ground floor	Parliament has 200,000 visitors p.a., of which 87,000 are tour and educational groups. The current layout of the lobby visitor numbers are almost at capacity. This initiative will enable better utilisation of space and allow for continued growth particularly from the tour and education group sector.	Grow the Business	Wellington	Pre-project	4.00	4.25	7/1/2016	6/30/2016	1. unknown vendor - one-step procurement methodology	N/A	Non-residential Building					
8	Social	Construction	Parliamentary Service	0000877	Future Accommodation Strategy	To provide a long term accommodation strategy for Parliament (2022 completion).	Grow the Business	Wellington	Pre-project	147.40	235.00	7/1/2016	6/30/2024	Unknown Supplier - Multi step procurement process	N/A	Non-residential Building					
9	Social	Construction	Parliamentary Service	0001201	Parliamentary Library building roof chiller repl	This initiative is designed to ensure the reliability and performance of the Parliamentary Library chiller equipment.	Keep the Business Running	Wellington	Pre-project	1.20	1.30	7/1/2017	6/29/2018	1. unknown vendor - one-step procurement methodology	N/A	Plant & Equipment					
10	Social	Construction	Parliamentary Service	0001202	Parliament House building services upgrade	Parliament has 200,000 visitors p.a., of which 87,000 are tour and educational groups. The current layout of the lobby visitor numbers are almost at capacity. This initiative will enable better utilisation of space and allow for continued growth particularly from the tour and education group sector.	Keep the Business Running	Wellington	Start-up	1.40	1.65	7/1/2016	6/30/2020	1. unknown vendor - one-step procurement methodology	N/A	Non-residential Building					
11	Social	Construction	Social Development, Ministry of	0001174	Future State office Environment	A redesigned service delivery centre that responds to the changing health, safety and security environment, including encapsulating the principals articulated in the Government Protective Security Requirements (PSR), which supports the changing service delivery business model.	Transformational Change	All of New Zealand	Start-up	75.00	75.00	1/1/2015	12/31/2015	This project is currently in start up and as such no active procurement has begun.	Programme	Non-residential Building					
12	Social	Cultural	Culture & Heritage, Ministry for	0000501	Ti Papa Capital Replacement	Included as a budget bid, awaiting confirmation of funding.	Keep the Business Running	Wellington	Implement	200.00	40.00	6/30/2020		1. Multiple suppliers across a number of disciplines - One-step procurement approach	N/A	Infrastructure Assets					
13	Social	Cultural	Culture & Heritage, Ministry for	0000737	Mānuka Cultural Centre	Mānuka Cultural Centre	Grow the Business	Auckland	Pre-project	60.00		1/1/2017	6/30/2020		N/A	Specified Culture & Heritage Assets					
14	Social	Cultural	Culture & Heritage, Ministry for	0000832	Military Heritage Delivery Arrangements	Business case examining delivery of NZ military heritage with a national focus	Grow the Business	All of New Zealand	Pre-project	173.00	20.00			1. Coffey Project Management - multi step procurement process 2. WTP NZ Infrastructure Ltd - other	N/A	Specified Culture & Heritage Assets					

Central Government Pipeline¹

The Central Government Pipeline tab in the Capital Intentions Plan provides the following project details (in order): Sector, Sub-Sector, Agency Name, Sub-Agency, Work ID, Project Name, Project Description, Project Type, Region, Position in Lifecycle, Cost Total (NZD \$M), Estimated Whole Cost (NZD \$M), Start Date, Planned End Date, Procurement, Agency/Portfolio/Programme, Asset Class 1, Asset Class 2, Asset Class 3. The data included in the Central Government Pipeline was collected from data submitted by the government agencies to the Treasury in mid-2016. This submission is a requirement of the agencies' Government Project Portfolio.

Guiding Framework: New Zealand Project Details: Local Government

Local Government Capital Intentions									
Inclusion of a project does not mean that it has been funded or approved, will proceed, or that if it does proceed, it will be the scale and timeframe indicated in this report. It is however, the best available picture at this particular point in time.									
Sector	Sub Sector	Region	Council	Council Project Code	Project Description	Cost Total (NZD in M)	Start Date	Planned Finish Date	
Social	Community	Canterbury	Ashburton District Council	TBA	New Administration Building	15.300	2015	2018	
Transport	Roadway	Canterbury	Ashburton District Council	TBA	Second Ashburton Urban Bridge	14.433	2018	2025	
Transport	Roadway	Canterbury	Ashburton District Council	TBA	Unsealed road rehabilitation	1.761	2015	2017	
Water	Stormwater	Canterbury	Ashburton District Council	TBA	Ashburton - Mill Creek bank stabilisation - Stage 6	1.267	2016	2017	
Water	Water Supply	Canterbury	Ashburton District Council	TBA	North East Ashburton Water Rehabilitation	4.256	2018	2020	
Water	Water Supply	Canterbury	Ashburton District Council	TBA	North West Ashburton Servicing	2.332	2018	2023	
Water	Stormwater	Canterbury	Ashburton District Council	TBA	West Street Trunk Main (Hawke's Bay to outfall)	3.953	2016	2018	
Social	Community	Canterbury	Ashburton District Council	TBA	Civic Building Strengthening	1.700	2016	2017	
Water	Stormwater	Canterbury	Ashburton District Council	TBA	West Street Trunk Main (Wills St to Hawke's Bay)	1.587	2018	2025	
Water	Stormwater	Canterbury	Ashburton District Council	TBA	West Street Trunk Main (Wills St to Hawke's Bay)	4.069	2018	2025	
Transport	Roadway	Canterbury	Ashburton District Council	TBA	Minor Roadway Improvements	1.916	2015	2018	
Transport	Roadway	Canterbury	Ashburton District Council	TBA	Minor Roadway Improvements	5.231	2018	2025	
Transport	Roadway	Canterbury	Ashburton District Council	TBA	Unsealed road rehabilitation	1.029	2017	2018	
Transport	Roadway	Canterbury	Ashburton District Council	TBA	Unsealed road rehabilitation	6.016	2018	2025	
Transport	Roadway	Canterbury	Ashburton District Council	TBA	Sealed Roads - resurfacing	2.328	2016	2017	
Transport	Roadway	Canterbury	Ashburton District Council	TBA	Sealed Roads - resurfacing	2.964	2017	2018	
Transport	Roadway	Canterbury	Ashburton District Council	TBA	Sealed Roads - resurfacing	23.288	2018	2025	
Transport	Roadway	Canterbury	Ashburton District Council	TBA	Additional Roadway Investment	2.076	2015	2018	
Transport	Roadway	Canterbury	Ashburton District Council	TBA	Additional Roadway Investment	5.867	2018	2025	
Transport	Roadway	Canterbury	Ashburton District Council	TBA	Drainage renewals	1.547	2015	2018	
Transport	Roadway	Canterbury	Ashburton District Council	TBA	Drainage renewals	3.775	2018	2025	
Transport	Roadway	Canterbury	Ashburton District Council	TBA	Sealed Roads - rehabilitation	2.158	2016	2017	
Transport	Roadway	Canterbury	Ashburton District Council	TBA	Sealed Roads - rehabilitation	1.918	2017	2018	
Transport	Roadway	Canterbury	Ashburton District Council	TBA	Footpath Resurfacing	15.537	2018	2025	
Transport	Roadway	Canterbury	Ashburton District Council	TBA	Footpath Resurfacing	2.334	2015	2018	
Transport	Roadway	Canterbury	Ashburton District Council	TBA	Footpath Resurfacing	6.613	2018	2025	
Water	Waste Water	Canterbury	Ashburton District Council	TBA	Ashburton - Relief Sewer & Ashburton Crossing construction	3.527	2017	2018	
Water	Waste Water	Canterbury	Ashburton District Council	TBA	Ashburton - Sewer main renewals	2.330	2015	2017	
Water	Waste Water	Canterbury	Ashburton District Council	TBA	Ashburton - Sewer main renewals	10.313	2017	2025	
Social	Community	Canterbury	Ashburton District Council	TBA	New Admin and Library Building	16.000	2016	2018	
Transport	Roadway	Canterbury	Ashburton District Council	TBA	NZTA Intersection Improvement	3.000	2020	2021	
Social	Community	Canterbury	Ashburton District Council	TBA	Stage 2 Residential Subdivision	1.300	2016	2017	
Water	Waste Water	Canterbury	Ashburton District Council	TBA	Wilkes Road Bypass Sewer	1.150	2016	2017	
Environment	Coastal Protection	Auckland	Auckland Council	TBA	Access coastal protection nourishment (Dreva beach)	1.555	2012	2018	
Social	Community	Auckland	Auckland Council	TBA	Admin building renewals (Bledisloe House)	7.544	2015	2025	
Social	Community	Auckland	Auckland Council	TBA	Admin building renewals (Graham St)	1.670	2016	2017	
Social	Community	Auckland	Auckland Council	TBA	Admin building renewals (Graham St)	4.012	2017	2018	
Social	Community	Auckland	Auckland Council	TBA	Admin building renewals (Korukau House)	3.262	2015	2025	
Social	Community	Auckland	Auckland Council	TBA	Admin building renewals (Manukau - Civic)	2.057	2015	2020	
Social	Community	Auckland	Auckland Council	TBA	Admin building renewals (Manukau)	1.635	2018	2025	

Local Government Pipeline¹

The Local Government Pipeline tab in the Capital Intentions Plan provides the following project details (in order): Sector, Sub-Sector, Region, Council, Council Project Code, Project Description, Cost Total (NZD in M), Start Date, Planned Finish Date. The data included in the Local Government Pipeline was collected from the 2015 Ten-Year Long Term Plans.

Guiding Framework: New Zealand

Project Details: Private Sector

1	Private Sector Capital Intentions							
2	Inclusion of a project does not mean that it has been funded or approved, will proceed, or that if it does proceed, it will be the scale and timeframe indicated in this report. It is however, the best available picture at this particular point in time.							
3	Sector	Sub Sector	Region	Company	Project	Cost Total (NZD in M)	Start Date	Planned Finish Date
4	Energy	Electricity	On shore	Meridian Energy	Forsting Greenfield Electricity based power private partnership project	10.20	2014	2017
5	Energy	Hydro	Canterbury	Meridian Energy	Waitaki Dam and Power station upgrade	40.00	2013	2017
6	Energy	Minerals	All of New Zealand	OceanaGold Limited	Additional lifts for the tailings storage facility	10.00	2013	2017
7	Energy	Electricity	All of New Zealand	Transpower	Grid enhancement and development	169.00	2012	2022
8	Energy	Electricity	All of New Zealand	Transpower	Grid refurbishment and replacement	1868.00	2012	2022
9	Energy	Electricity	All of New Zealand	Transpower	Other Capital Expenditure	548.00	2012	2022
10	Energy	Electricity	All of New Zealand	Transpower	Upper North Island Dynamic Reactive support	66.00	2012	2018
11	Energy	Electricity	Manawatu-Wanganui	Transpower	Bunnthorpe - Haywards A & B Conductor replacement project	162.00	2014	2020
12	Energy	Electricity	Otago	Transpower	Clutha Upper Waitaki Lines Project	197.00	2016	2020
13	Energy	Wind	Off Shore	Trustpower Limited	Dundonnell Wind Farm	850.00	2017	2019
14	Transport	Air	All of New Zealand	Air NZ Ltd	Aircrafts	1800.00	2013	2017
15	Transport	Air	All of New Zealand	Airways Corporation	Value-adding assets	96.00	2013	2023
16	Transport	Air	All of New Zealand	Airways Corporation	Lifecycle replacements	452.00	2013	2023
17	Transport	Air	Wellington	Airways Corporation	Wellington Control Tower	16.00	2015	2018
18	Transport	Air	Auckland	Auckland International Airport	Aeronautical Capital Expenditure	120.00	2015	2018
19	Transport	Air	Auckland	Auckland International Airport	Property Capital Expenditure	73.00	2016	2018
20	Transport	Sea	Wellington	Centre Port	Dredging Wellington Harbour	37.00	2017	2020
21	Transport	Air	Otago	Dunedin International Airport	Airside Pavement & Services	5.00	2013	2020
22	Transport	Air	Otago	Dunedin International Airport	Car park expansion	5.00	2015	2021
23	Transport	Air	Otago	Dunedin International Airport	Terminal - expansion of baggage and passenger facilities	10.00	2015	2017
24	Transport	Air	Gisborne	Eastland Group (Gisborne Port)	Gisborne Airport runway resal	2.50	2015	2016
25	Transport	Air	Hawkes Bay	Hawkes Bay Airport	Extend car parking area	1.10	2014	2016
26	Transport	Air	Hawkes Bay	Hawkes Bay Airport	Terminal Redevelopment	4.50	2016	2018
27	Transport	Air	Hawkes Bay	Hawkes Bay Airport	Further business park stages	6.50	2016	2022
28	Transport	Air	Hawkes Bay	Hawkes Bay Airport	Apron extension pushback stands	1.20	2018	2022
29	Transport	Air	Hawkes Bay	Hawkes Bay Airport	Starline extensions	1.50	2018	2022
30	Transport	Air	Hawkes Bay	Hawkes Bay Airport	Runway extension to 1940m	2.90	2018	2022
31	Transport	Air	Hawkes Bay	Hawkes Bay Airport	International development	3.80	2018	2022
32	Transport	Air	Hawkes Bay	Hawkes Bay Airport	Code C Taxiway	3.30	2022	2024
33	Transport	Rail	Wellington	KiwiRail	Stabilising Slopes to prevent risk of slips in Wellington Region	10.00	Pre 2012	2015
34	Transport	Rail	All of New Zealand	KiwiRail	Planned network and infrastructure renewals and upgrades on rail freight networks	1782.00	2013	2023
35	Transport	Rail	Manawatu-Wanganui	KiwiRail	Makotote Viaduct Refurbishment Project	13.00	2014	2016
36	Transport	Sea	Canterbury	Lytelton Port Company	Channel Deepening Project	80.00	2017	2019
37	Transport	Air	Nelson	Nelson Airport	New terminal	32.00	2016	2018
38	Transport	Air	Taranaki	New Plymouth Airport	Airport redevelopment	11.00	2017	2017
39	Transport	Sea	Port of Taranaki	Port of Taranaki	Capital Works Programme (Berth Deepening, Channel Deepening, Warehouse)	30.00	2015	2017
40	Transport	Air	Otago	Queenstown Airport	Runway and Airfield Lighting	1.55	2015	2016
41	Transport	Air	Otago	Queenstown Airport	Runway works	18.00	2015	2016
42	Transport	Air	Bay of Plenty	Rotorua Airport	Airport Upgrade	3.60	2016	2018
43	Transport	Air	Bay of Plenty	Tauranga Airport	Airport Upgrade	4.50	2016	2017
44	Transport	Air	Wellington	Wellington Airport	Apron, Airside and Runway	15.00	Pre 2012	2030
45	Transport	Air	Wellington	Wellington Airport	Car Parking	140.00	Pre 2012	2030

Private Sector Pipeline¹

The Private Sector Pipeline tab in the Capital Intentions Plan provides the following project details (in order): Sector, Sub-Sector, Region, Company, Project, Cost Total (NZD in M), Start Date, Planned Finish Date, Link to Website. The data included in the Private Sector Pipeline was collected from publicly available information for companies which are listed on the New Zealand Stock Exchange. These public sources include annual reports and company websites.

Case Study: United Kingdom

Guiding Framework: United Kingdom

Overview

Description	The National Infrastructure and Construction Pipeline provides details of planned public and private sector infrastructure and construction investment over the next ten years with a focus on the next 5 years. It builds on the National Infrastructure Delivery Plan, which is the UK's plan to support the delivery of a variety of infrastructure projects. It does not include any projects for which the public infrastructure spending is the responsibility of the devolved governments of Scotland, Wales and Northern Ireland.		
Jurisdiction	Central Government, Regional Governments, Local Authorities and Private Sector		
Number of Projects	694		
Publishing Authority	HM Treasury Infrastructure and Projects Authority		
Frequency	Annually		
Timeline	2016 - 2021		

Policy paper National Infrastructure and Construction Pipeline 2017

A forward-looking pipeline of planned projects and programmes in economic and social infrastructure.

Published 4 December 2017
Last updated 29 January 2018
From HM Treasury and Infrastructure and Projects Authority

Documents

[Analysis of National Infrastructure and Construction Pipeline 2017](#)
PDF, 2.58 MB, 59 pages

[National Infrastructure and Construction Pipeline Autumn 2017](#)
PDF, 3.5 MB
The Pipeline is an updated annual

Related content

More policy experts about UK economy from HM Treasury

Collection
National Infrastructure Delivery Plan and Pipeline

Excel File Link: https://www.gov.uk/government/uploads/attachment_data/file/684444/national-infrastructure-and-construction-pipeline-2017

Guiding Framework: United Kingdom Pipeline Characteristics

Guiding Framework: United Kingdom Pipeline Characteristics - Screenshots

Autumn 2017 National Infrastructure and Construction Pipeline (constant 2016/17 prices)

Sector	No. of projects & programmes	Total (£m)	2017/18 (£m)	2018/19 (£m)	2019/20 (£m)	2020/21 (£m)	Post 2020/21 (£m)
Communications	7	£10,813.0	£4,062.2	£3,055.4	£2,967.6	£727.8	£0.0
CPS	2	£2.1	£0.5	£0.9	£0.7	£0.0	£0.0
Education	22	£19,234.0	£5,029.6	£5,734.7	£4,336.7	£4,132.0	£1.1
Energy	108	£191,338.5	£14,058.2	£13,973.1	£15,148.9	£13,886.1	£134,272.2
Flood Defence	29	£3,759.3	£543.3	£629.6	£549.7	£619.7	£1,417.0
Health	24	£7,060.1	£1,476.8	£1,041.2	£1,452.0	£1,420.8	£1,669.5
Home Office	6	£87.0	£53.7	£11.1	£22.2	£0.0	£0.0
Housing and Regeneration	16	£13,188.1	£2,220.7	£2,787.4	£3,173.5	£3,706.6	£1,300.0
Justice	33	£1,733.3	£245.4	£690.5	£797.3	£0.0	£0.0
Ministry of Defence	44	£5,304.4	£1,529.2	£1,094.5	£657.8	£512.4	£1,510.4
Police Forces	37	£1,015.2	£296.7	£332.4	£255.4	£112.6	£18.0
Science and Research	21	£6,111.5	£1,295.2	£1,214.2	£1,448.4	£1,166.3	£987.3
Transport	241	£135,276.9	£18,693.8	£19,315.4	£19,725.6	£20,726.3	£56,815.8
Utilities	97	£67,440.4	£12,781.9	£13,371.8	£12,816.4	£8,437.0	£20,033.2
Waste	7	£335.6	£229.2	£78.4	£28.0	£0.0	£0.0
Grand Total	694	£462,699.4	£62,516.6	£63,330.7	£63,380.1	£55,447.6	£218,024.4

Pipeline Summary¹

The National Infrastructure and Construction Pipeline provides both the raw data (pipeline) as well as a summary of that data. The above screenshot represents a summary of the project data categorized by sector. The Pipeline Summary provides the number of projects/programmes included on the pipeline as well as the total and yearly spend for each sector (2017/18 – post 2020/21). The pipeline summary also provides the same information only it is categorized by sub-sector in separate charts, one for each sector (as seen below for the Waste sector). These summaries can be found on the Pipeline Summary tab in the National Infrastructure and Construction Pipeline file.

Waste

Sub-sector	No. of projects & programmes	Total (£m)	2017/18 (£m)	2018/19 (£m)	2019/20 (£m)	2020/21 (£m)	Post 2020/21 (£m)
PFI Projects	1	£44.1	£44.1	£0.0	£0.0	£0.0	£0.0
PPP Projects	6	£291.5	£185.1	£78.4	£28.0	£0.0	£0.0
Grand Total	7	£335.6	£229.2	£78.4	£28.0	£0.0	£0.0

Guiding Framework: United Kingdom

Project Details

Sector	Sub-Sector	Sub-Group	Key Client	Project / Programme Name	Project or Programme	No of projects	Project Summary
Communications	Digital economy	Digital Economy	BDUK	700 MHz Clearance Programme	Programme	Multiple	Up to £500m has been made available to make the 700 MHz band available for mobile
Communications	Digital economy	Digital Economy	BDUK	BT Digital Investment	Programme	Multiple	
Communications	Digital economy	Digital Economy	Various	New Digital Networks delivered by Allnets (alternative network)	Programme	Multiple	Private businesses building new digital networks including fibre to the premise
Communications	Digital economy	Mobile	Various	Mobile network upgrade (4G rollout and coverage improvements)	Programme	Multiple	Upgrade of mobile networks as a result of the release of the so called digital dividend
Communications	Digital economy	Rural Broadband	BDUK	Superfast Broadband Rollout Programme	Programme	42	Phase 1: Delivering superfast broadband (24Mbps+) to 90% of UK premises by early
Communications	Digital economy	Broadband	Virgin Media	Virgin - Project Lightning	Project	1	Virgin Media will extend its fibre-rich network to approximately four million additional
Communications	Digital economy	NPIF	NA	Digital Infrastructure Investment Fund	Programme	Multiple	A new Digital Infrastructure Investment Fund, at least matched by private finance to
CPS	CPS	CPS	CPS	CPS Maintenance	Programme	15	Various
CPS	CPS	CPS	CPS	CPS Maintenance	Programme	15	Various
Education	Further Education	NA	NA	National Colleges Investment Fund	Programme	4	Confirmation of the approved successful bids notified in March 2016: DfEE SFA
Education	Further Education	NA	NA	Royal College of Arts	Project	1	This is the Battersea South project at the Royal College of Arts (RCA), which aims to
Education	Schools	NA	Education and Skills Funding	East Midlands	Programme	Multiple	Devolved budget to LA's and schools for Basic Need and School Condition Allocations
Education	Schools	NA	Education and Skills Funding	East of England	Programme	Multiple	Devolved budget to LA's and schools for Basic Need and School Condition Allocations
Education	Schools	NA	Education and Skills Funding	Balance of spend identified in investing in Britain's Future	Programme	Multiple	Balance of spend identified in investing in Britain's Future. This line has been added to
Education	Schools	NA	Education and Skills Funding	Condition Improvement Fund	Programme	Multiple	The Condition Improvement Fund is a bid-based programme providing condition
Education	Schools	NA	Education and Skills Funding	Devolved Formula Capital for Academies and 6th form colleges	Programme	Multiple	Devolved formula capital for various education providers; school condition allocations
Education	Schools	NA	Education and Skills Funding	DEC for Local Authorities Maintained and Voluntary Aided schools	Programme	Multiple	Devolved Formula Capital to maintained and VA schools
Education	Schools	NA	Education and Skills Funding	Early years capital programme	Programme	189	Programme to allow local authorities to expand the childcare provision in their areas.
Education	Schools	NA	Education and Skills Funding	Healthy pupils capital programme	Programme	Multiple	Programme to provide funding for primary, secondary and sixth form schools to pay for
Education	Schools	NA	Education and Skills Funding	MAT allocations	Programme	Multiple	Eligible Multi-Academy Trusts (MATs) receive formulaic condition funding. In order to
Education	Schools	NA	Education and Skills Funding	Priority School Building Programme Capital	Programme	261	Programme to rebuild or address the condition need at 261 schools in England in the
Education	Schools	NA	Education and Skills Funding	Priority School Building Programme Capital 2	Programme	277	A further phase of the Priority School Building Programme was announced in May 2014.
Education	Schools	NA	Education and Skills Funding	Selective schools expansion programme	Programme	Multiple	The selective schools expansion budget covers the cost of expanding existing schools
Education	Schools	NA	Education and Skills Funding	London	Programme	Multiple	Devolved budget to LA's and schools for Basic Need and School Condition Allocations
Education	Schools	NA	Education and Skills Funding	Midlands	Programme	Multiple	Devolved budget to LA's and schools for Basic Need and School Condition Allocations
Education	Schools	NA	Education and Skills Funding	North West	Programme	Multiple	Devolved budget to LA's and schools for Basic Need and School Condition Allocations
Education	Schools	NA	Education and Skills Funding	South East	Programme	Multiple	Devolved budget to LA's and schools for Basic Need and School Condition Allocations
Education	Schools	NA	Education and Skills Funding	South West	Programme	Multiple	Devolved budget to LA's and schools for Basic Need and School Condition Allocations
Education	Schools	NA	Education and Skills Funding	West Midlands	Programme	Multiple	Devolved budget to LA's and schools for Basic Need and School Condition Allocations
Education	Schools	NA	Education and Skills Funding	Yorkshire and the Humber	Programme	Multiple	Devolved budget to LA's and schools for Basic Need and School Condition Allocations

National Infrastructure and Construction Pipeline¹

The National Infrastructure and Construction Pipeline provides the following project details (in order)*:

1. Sector	10. Asset Ownership	19. 2017/18 (£m)	28. 2016/17 (£m constant)
2. Sub-Sector	11. Economically Regulated Asset	20. 2018/19 (£m)	29. 2017/18 (£m constant)
3. Sub-Group	12. Funding Source	21. 2019/20 (£m)	30. 2018/19 (£m constant)
4. Key Client	13. Scheme Status	22. 2020/21 (£m)	31. 2019/20 (£m constant)
5. Project/Programme Name	14. Start of Works/Construction (Projected)	23. 2021/22 and Beyond (£m)	32. 2020/21 (£m constant)
6. Project or Programme	15. Date in Service (Projected)	24. Basis of Costs	33. 2021/22 and Beyond (£m constant)
7. No of Project	16. Total Capex Cost: All Funding (£m)	25. Base Year	34. 2017/18 to 2020/21 (£m constant)
8. Project Summary	17. Total Capex Cost: Publically Funded (£m)	26. Data Source	35. 2017/18 Onwards (£m constant)
9. ONS Region	18. 2016/17 (£m)	27. Public Notes	

*Note: the pipeline screenshot only includes the first 8 columns of data. The pipeline has 35 columns of data in total. These 35 column categories are all listed above in the order in which appear on the pipeline

¹Excel File Link: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/314646/national-infrastructure-and-construction-pipeline-2017

Case Study: Infrastructure Ontario

Guiding Framework: Infrastructure Ontario Overview

Description	The Infrastructure Ontario Pipeline provides detailed information regarding the renewal of public services and infrastructure assets through the creation of partnerships to successfully manage, build, finance, operate and maintain these public assets.		
Jurisdiction	Ontario		
Number of Projects	130 Total 106 AFP/Major, 8 Commercial, 16 real Estate		
Publishing Authority	Infrastructure Ontario, Government of Ontario Crown Agency		
Frequency	Projects are added to the pipeline as they are identified and assigned to Infrastructure Ontario by the Ministry of Infrastructure		
Timeline	N/A		

Infrastructure Ontario Projects

All Types

AFP / Major

Commercial

Real Estate

Find a Project

Stage:

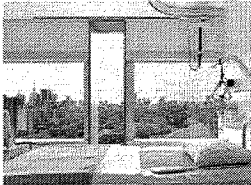
Sector:

All Stages


All Sectors

Map View


Showing 7 - 12 of 130






» Bridgepoint Health DBFM - Design Build Finance Maintain



» Brockville General Hospital Redevelopment Project BF - Build Finance



» Cambridge Memorial Hospital BF - Build Finance

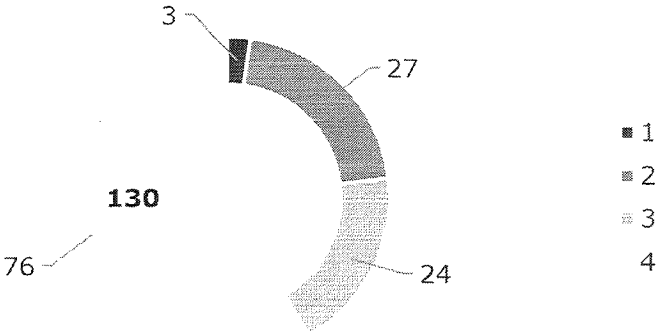




Website Link:
<http://www.infrastructureontario.ca/Projects/?projectId=-1>

Guiding Framework: Infrastructure Ontario Pipeline Characteristics

Criteria For Adding / Removing Projects	Project Stages
<p>Added Projects are assigned to Infrastructure Ontario by the Ontario Ministry of Infrastructure based on Ontario’s long-term infrastructure plan and its budget</p> <p>Removed TBD</p>	<ul style="list-style-type: none"> • In Planning • In Procurement • Under Construction • Complete
Infrastructure Sectors Covered	
<ul style="list-style-type: none"> • Education • Health Care • Justice • Tourism, Culture & Sport • Transit • Transportation • Other 	

Number of Projects at Each Stage¹



¹ Source: <http://www.infrastructureontario.ca/Projects/?projectId=-1&stageId=-1§orId=-1>

Guiding Framework: Infrastructure Ontario Project Details



Pipeline Filters¹

The pipeline provides the user the option of filtering the projects on the pipeline by three categories:

- Project Type
 - AFP/Major
 - Commercial
 - Real Estate
- Stage
 - In Planning
 - In Procurement
 - Under Construction
 - Complete
- Sector
 - Education
 - Health Care
 - Justice
 - Tourism, Culture & Sport
 - Transit
 - Transportation
 - Other

The user also has the ability to search for a specific project.

Project Information²

Each project on the pipeline has its own webpage which contains details about the project including information in the following categories: project description, project overview and timeline, project benefits and additional information. Screenshots of the specific information can be seen below and on the next slide. The categories' are numbered as per the order they appear on the projects page.

The screenshot shows the project details page for the 'Centre for Addiction and Mental Health (CAMH) Phase 1C Redevelopment'. It includes an aerial view of the project site. The details listed are:

- Location:** Toronto
- Project Type:** DBFM - Design Build Finance Maintain
- Infrastructure Type:** Health Care
- Contract Value:** \$685 million
- Estimated Value for Money:** \$105 million

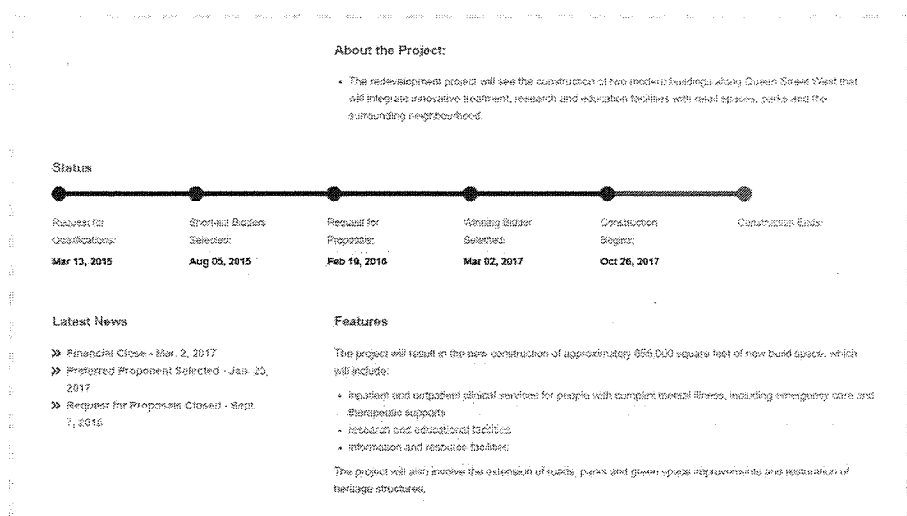
Below the details, there are two numbered sections:

- Project Description**
 - Project Title
 - Location
 - Project Type
- Infrastructure Type**
 - Infrastructure Type
 - Contract Value
 - Estimated Value for Money

¹ Source: <http://www.infrastructureontario.ca/Projects/?projectId=-1>

² Source: [http://www.infrastructureontario.ca/Centre-for-Addiction-and-Mental-Health-\(CAMH\)-Phase-1C-Redevelopment/](http://www.infrastructureontario.ca/Centre-for-Addiction-and-Mental-Health-(CAMH)-Phase-1C-Redevelopment/)

Guiding Framework: Infrastructure Ontario Project Details – Screenshots¹

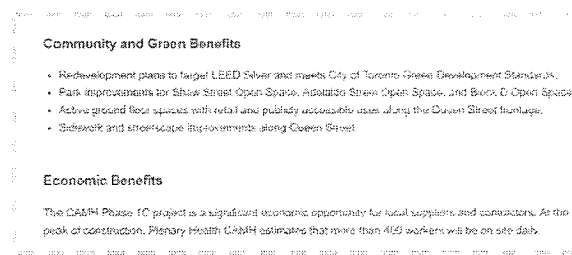


Project Overview and Timeline

- About the Project
- Status
- Latest News
- Features
- Winning Bidder (can be included if awarded)

Additional Information

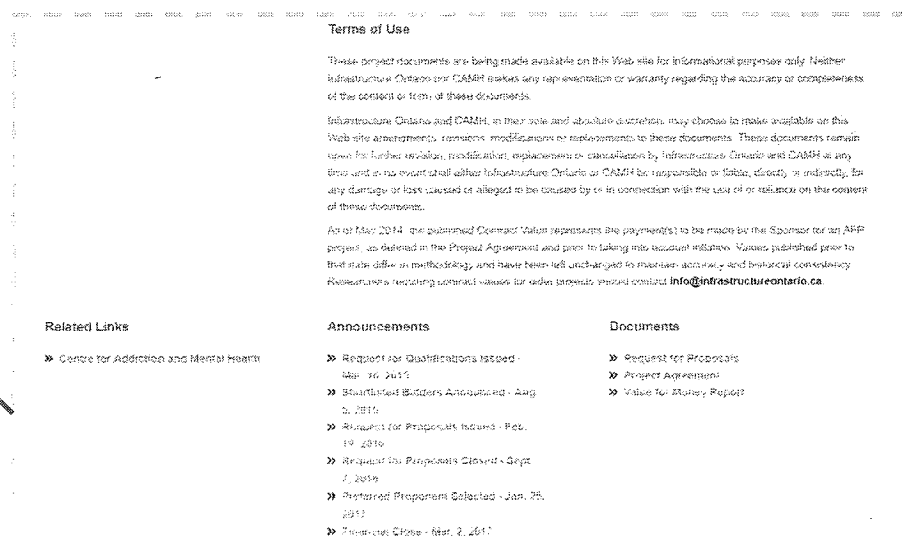
- Terms of Use
- Related Links
- Announcements
- Documents



3

Project Benefits

- Community and Green Benefits
- Economic Benefits



¹ Source: [http://www.infrastructureontario.ca/Centre-for-Addiction-and-Mental-Health-\(CAMH\)-Phase-1C-Redevelopment/](http://www.infrastructureontario.ca/Centre-for-Addiction-and-Mental-Health-(CAMH)-Phase-1C-Redevelopment/)

Case Study: Global Infrastructure Project Pipeline

Guiding Framework: Global Infrastructure Project Pipeline Overview

Description	<p>The Global Infrastructure Project Pipeline provides early stage information on public infrastructure projects. This information can be used by investors to properly assess the opportunities presented by these early stage infrastructure projects. It also provides international visibility into the participating countries infrastructure plans.</p>	
Jurisdiction	International Governments	
Number of Projects	231	
Publishing Authority	G20 – Global Infrastructure Hub	
Frequency	Updated by the project’s relevant government agency	
Timeline	TBD	



Website Link: <https://pipeline.gihub.org/>

Guiding Framework: Global Infrastructure Project Pipeline

Pipeline Characteristics

Criteria For Adding / Removing Projects

Added

Projects are added to the pipeline by the project’s relevant government body. This requires someone from the government body to have an account on the Global Infrastructure Project Pipeline, and have requested and received permission to contribute to the projects.

Removed

TBD

Infrastructure Sectors Covered

Communications

Energy

Other

Social

Transport

Water & Waste

Project Stages

Stage 1: Initial Government Announcement

Stage 2: Project Investigation

Stage 3: Start of Project Feasibility/Business Case

Stage 4: Project Feasibility/Business Case Complete

Stage 5: Government Approval/Procurement Stage

Stage 6:

Case

Successful/Preferred Proponent

Stage 7: Financial Close/Start of Construction

Stage 8: Operations Phase/Construction Complete

Number Of Projects At Each Stage¹

Stage	Sum of Water & Waste	Sum of Transport	Sum of Social	Sum of Other	Sum of Energy	Sum of Communications
1	10	10	10	10	10	10
2	20	20	20	20	20	20
3	15	15	15	15	15	15
4	10	10	10	10	10	10
5	5	5	5	5	5	5
6	2	2	2	2	2	2
7	1	1	1	1	1	1
8	1	1	1	1	1	1

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Guiding Framework: Global Infrastructure Project Pipeline

Project Details – Screenshots

Mexico City New International Airport (NAICM)

Mexico

Stage 6: Successful / Preferred Proponent

GOVERNMENT SPONSOR
Grupo Aeroportuario de la Ciudad de México (GAI/CM) / Ministry of Communications and Transporto

SECTOR
Transport & Airport

TYPE
Greenfield

VALUE
\$16.0 bn USD

PROJECT LOCATION (E.G. MAJOR GEOGRAPHIC REFERENCE)
Mexico City metropolitan area, Mexico.

OPPORTUNITY FOR PRIVATE SECTOR INVOLVEMENT
Equity Debt - Private Sector Construction
Advisory Debt - Green Finance Initiative

LAST UPDATED
Q1 2018

Follow
Share
Print
Download project
Project data uploaded by:

Project Overview¹

- Project Title
- Country
- Stage
- Government Sponsor
- Sector
- Type
- Values
- Project Location
- Opportunity for Private Sector Involvement
- Last Updated
- Follow
- Share
- Print
- Download Project

Project Description

The Project will attend the increasing demand of air transport services in Mexico City metropolitan area. The NAICM will have 6 runways and 1 will have a capacity of 100 million passengers per year in 2028. The Project includes several documents and documents.

Project Description¹

- Map
- Project Description
- Relevant Documents & Links

Project Filter Categories²

- Stages
- Region
- Country
- Sector
- Government Sponsor
- Private Sector Opportunity
- Price Range

231 projects

Filter Projects

- Stages
- Region
- Country
- Sector
- Government Sponsor
- Private Sector Opportunity
- Price Range

Castellón Arena

Atletico Madrid

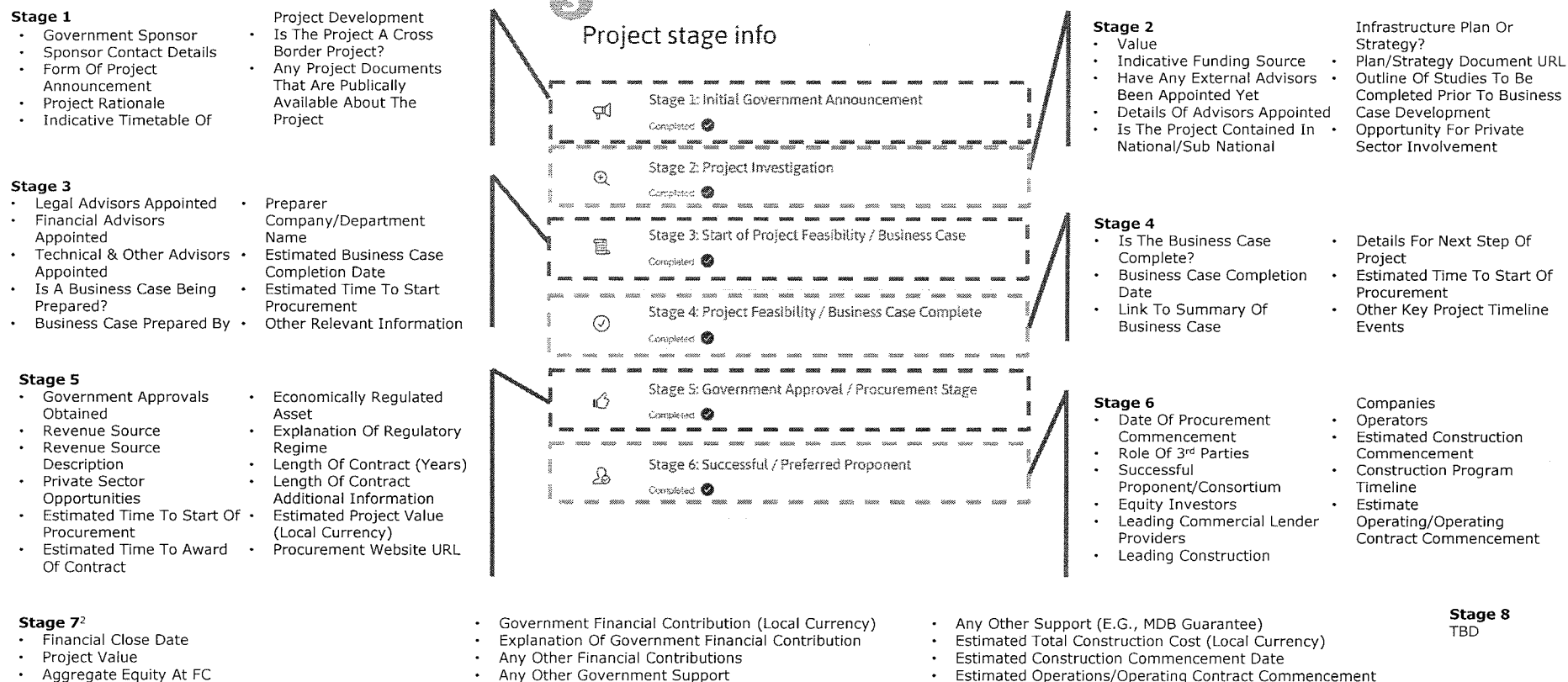
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¹ Source: <https://pipeline.gihub.org/Project/ProjectDetails/72>

² Source: <https://pipeline.gihub.org/Project/Search?search=true&stage=8>

Guiding Framework: Global Infrastructure Project Pipeline

Project Details – Screenshots¹



¹ Source: <https://pipeline.github.org/Project/ProjectDetails/73>

² Source: <https://pipeline.github.org/Project/ProjectDetails/105>



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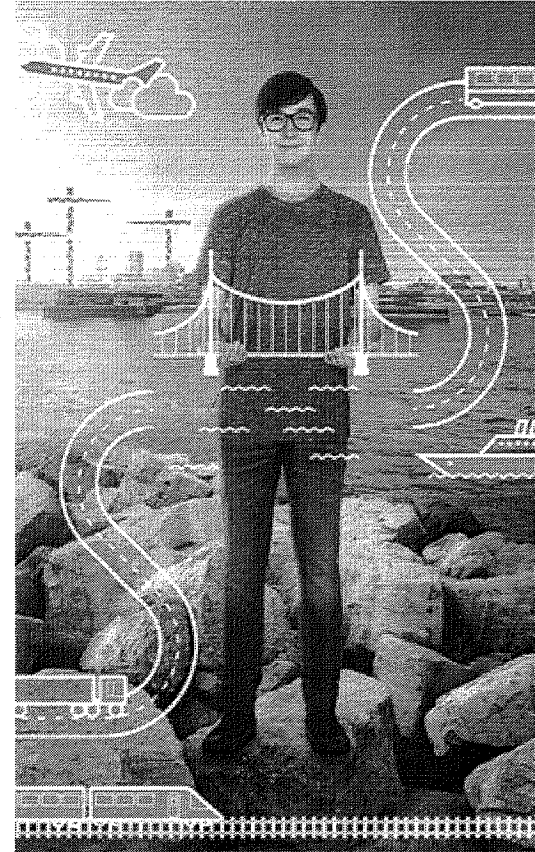
Innovative Financing: The Canada Infrastructure Bank

February 2018

Canada

Outline

- Context
- Policy
- Mandate
- Roles
- Governance
- Investments
- Expertise
- Progress



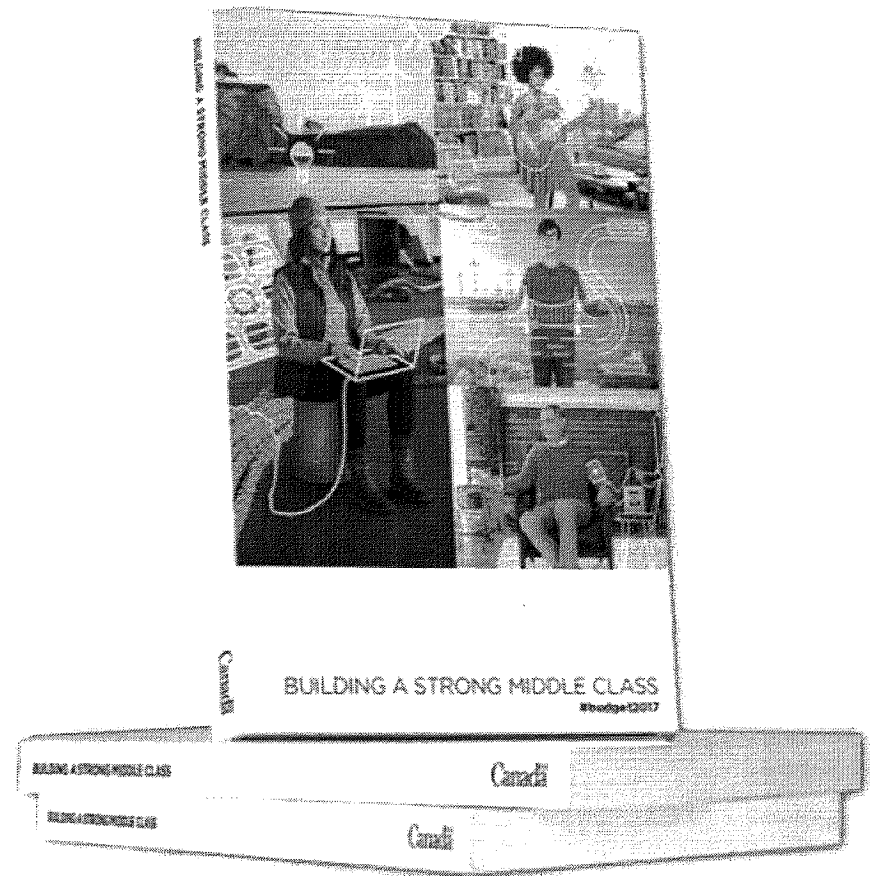
Context

- Canadian infrastructure gap exists, similar to other countries. Bridging the gap through public finances alone is an unsustainable burden on taxpayers
- Institutional investors, domestic and global, seeking stable and predictable returns of the infrastructure asset class, and willing to absorb risk
- Increasing the participation of institutional capital will allow governments to invest more in projects
- Building more efficient infrastructure to support economic growth and prosperity, and meeting social and environmental needs

Policy

*The Canada Infrastructure Bank will work with provincial, territorial, municipal, Indigenous, and private sector and institutional investment partners **to transform the way infrastructure is planned, funded and delivered** across the country.*

*With its focus on large, transformative projects such as regional transit plans, transportation networks and electricity grid interconnections, the **Bank will make public dollars go farther.***



Mandate

- Bank's mandate is to:
 - make **investments in revenue-generating infrastructure projects** that are in the public interest
 - seek to **attract investment from private sector and institutional investors** into these types of projects

Roles

- The Bank has two key types of roles and functions:

Investment	Non-investment
Structuring and delivering federal support for revenue-generating infrastructure	Acting as a centre of expertise on infrastructure projects involving private sector investment
Investing in projects, including through innovative financial tools (debt or equity, loan guarantees)	Advising governments on revenue-generating projects
Receiving unsolicited proposals from private sector investors	Working with all orders of government to collect and share data to inform future investments

Governance

- **Arm's length Crown corporation:**
 - Led by a Chief Executive Officer and governed by an independent Board of Directors
 - Operate like a merchant or investment bank
- **Independent** commercial decisions on how to structure project financing, if project deemed "bankable"
- Government responsible for setting the overall policy direction and high-level investment priorities of the Bank
- Governments determine public interest of projects eligible for consideration of support from the Bank or other contribution programs

Tools

- The Bank would **invest \$35 billion** towards transformative infrastructure projects (with \$15 billion in expendable capital over 11 years)
- Wide breadth of financial instruments:
 - debt and equity investments;
 - loan guarantees; and,
 - other innovative tools
- Instrument choice and mix will depend on what makes most sense for any given project

Investments

- Bank would work cooperatively with all orders of government as well as investors to identify a **pipeline of projects** and potential investment opportunities
- **Due diligence** on investments and **approval process** of projects consistent with private/institutional investors
- Investments would be made strategically, in the public interest, and aims to **crowd-in private sector capital** that would not have otherwise been invested and efficiently **transfer risk**

Expertise

- Serve as a **centre of expertise** on infrastructure projects in which private sector or institutional investors are making a significant investment;
- Foster **evidence-based decision making** and advise all orders of government on the design of revenue-generating projects; and
- **Collect and share data** to help governments make better decisions about infrastructure investments

Progress

- Bank incorporated in June 2017, including legislated funding
- Chairperson and Board of Directors appointed
- Selection of the Chief Executive Officer underway
- Design and organizational development in train
- Extensive outreach with partners and investors



CANADA INFRASTRUCTURE BANK

A new and innovative financing tool to help public dollars go farther and help build more infrastructure projects in Canadian communities.

Canada

Annexes

INVESTING IN CANADA

\$180 + BILLION INFRASTRUCTURE PLAN OVER 12 YEARS

Create


long-term economic growth

PUBLIC TRANSIT

\$28.7 BILLION

Build new urban transit networks and service extensions that will transform the way Canadians live, move and work.

Budget 2016: \$3.4 billion
Budget 2017: \$20.3 billion
Canada Infrastructure Bank: \$5 billion



Build


inclusive communities

GREEN

\$26.9 BILLION

Ensure access to safe water, clean air, and greener communities where Canadians can watch their children play and grow.

Budget 2016: \$3 billion
Budget 2017: \$16.9 billion
Canada Infrastructure Bank: \$5 billion




SOCIAL

\$25.3 BILLION

Provide adequate and affordable housing and child care as well as cultural and recreational centers that will ensure Canada's communities continue to be great places to call home.

Budget 2016: \$3.4 billion
Budget 2017: \$21.9 billion



Support


a low carbon, green economy

TRADE AND TRANSPORTATION

\$10.1 BILLION

Provide safe, sustainable and efficient transportation systems that will bring global markets closer to Canada to help Canadian businesses compete, grow and create more middle-class jobs.

Budget 2017: \$5.1 billion
Canada Infrastructure Bank: \$5 billion





RURAL AND NORTHERN COMMUNITIES

\$2 BILLION

Grow local economies, improve social inclusiveness and better safeguard the health and environment of rural and northern communities.

Budget 2017: \$2 billion
In addition, the \$400 million Arctic Energy Fund will be delivered under this stream to support energy security in the territories.





DELIVERING THE PLAN

CANADA INFRASTRUCTURE BANK

Help public dollars go farther and build more infrastructure projects

BILATERAL AGREEMENTS

Achieve national objectives while providing provinces, territories and municipalities with the flexibility to meet their infrastructure priorities

DISASTER MITIGATION AND ADAPTATION FUND

Help communities adapt to a changing climate while mitigating the impacts of future disasters


SMART CITIES CHALLENGE

Encourage cities and their most creative minds to adopt new approaches to city-building

INVESTING IN INDIGENOUS COMMUNITIES

Improve community infrastructure and create new opportunities

The Investing in Canada plan also includes \$91 billion for existing and renewed infrastructure programs such as the federal Gas Tax Fund that provides over \$2 billion every year to municipalities.

www.infrastructure.gc.ca


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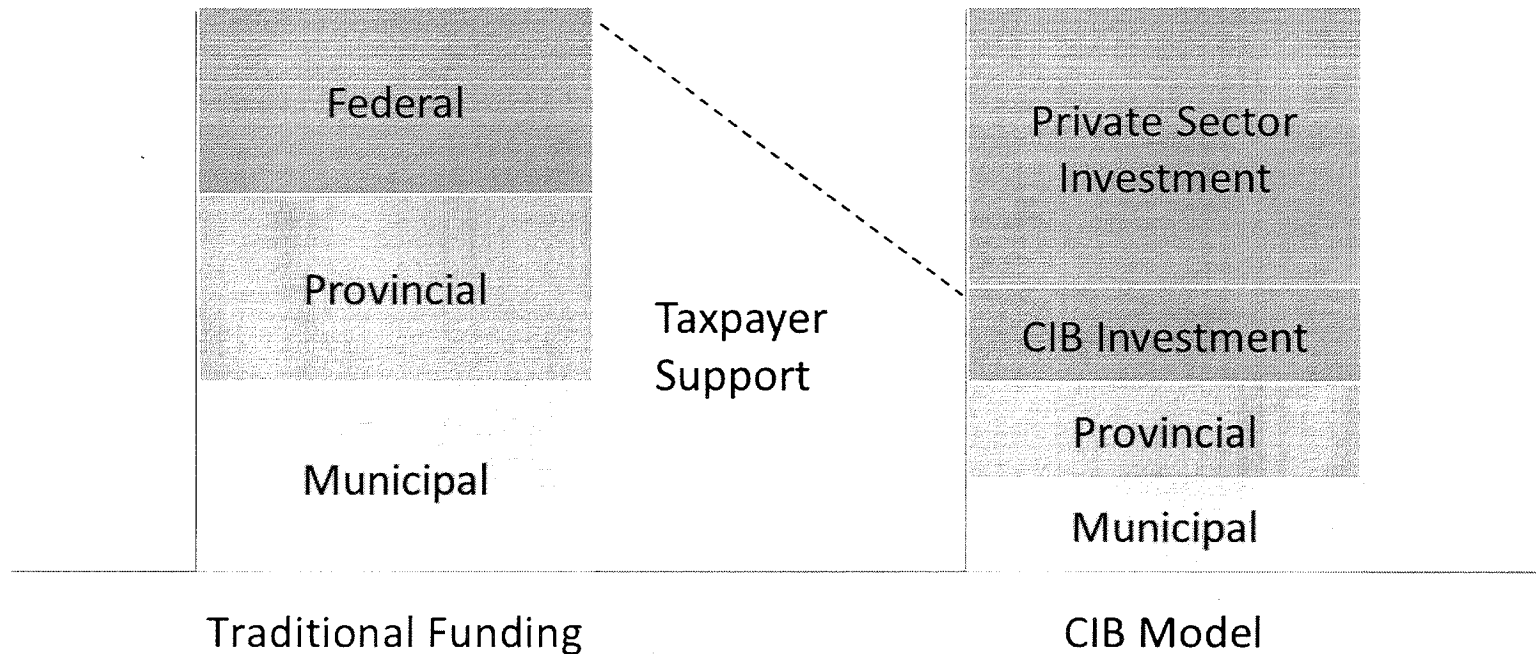
PPP versus CIB Finance

■ Typical project attributes

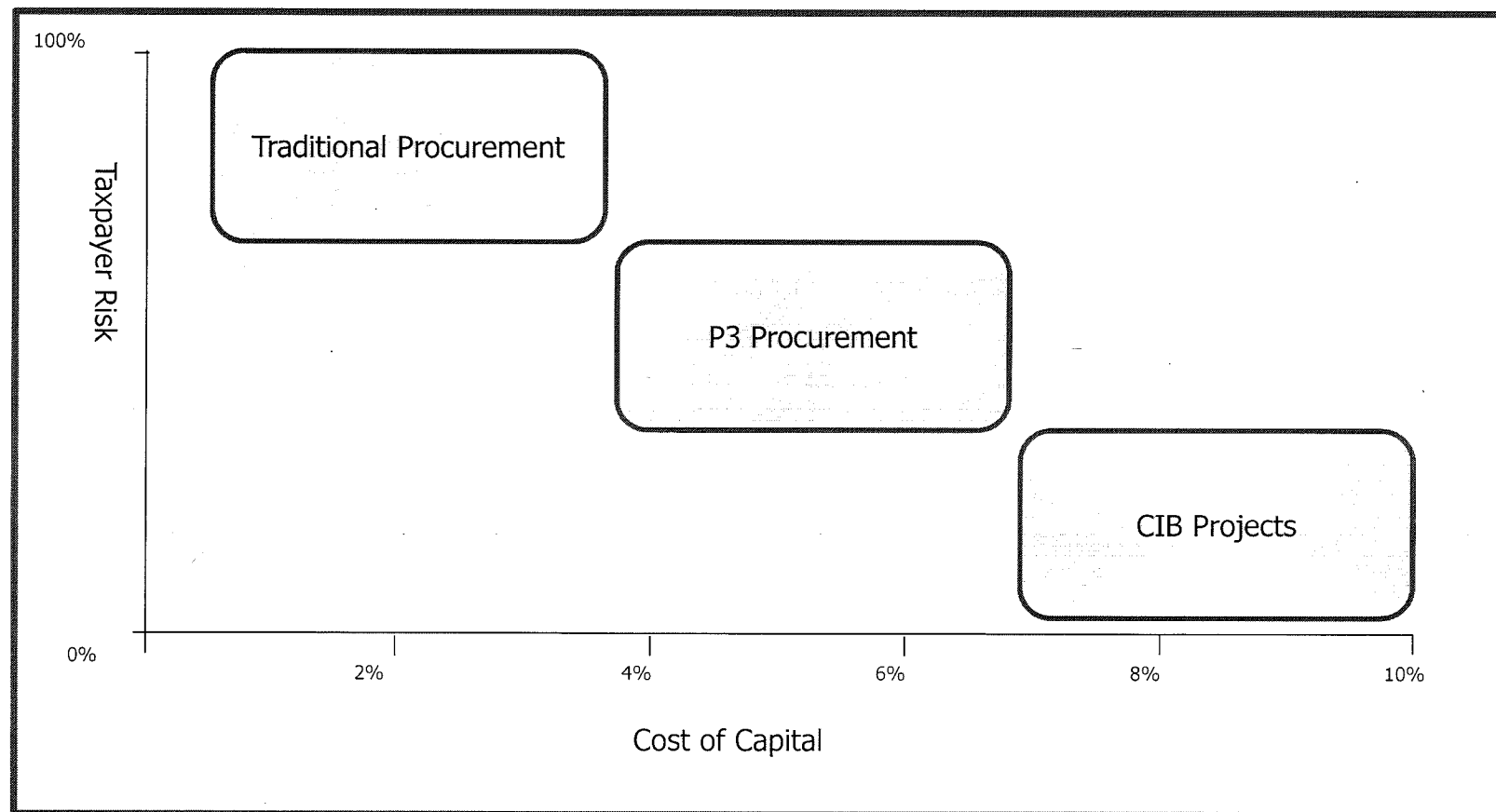
	PPP	CIB
Source of funding	Government availability payment	Revenue from infrastructure usage
Source of capital	Private and public	Private and public
<ul style="list-style-type: none"> • Private debt proportion • Private equity proportion 	<ul style="list-style-type: none"> • very high • very low 	<ul style="list-style-type: none"> • medium to high • low to medium
Role of federal support	Contribution	Investment (can be concessionary)
Ownership	Public	Private, Shared
Regulations / specifications	Provinces/Territories/ Municipalities, Federal Government	Provinces/Territories/ Municipalities, Federal Government

Illustrative Example

Infrastructure Funding Sources



Risk Transfer

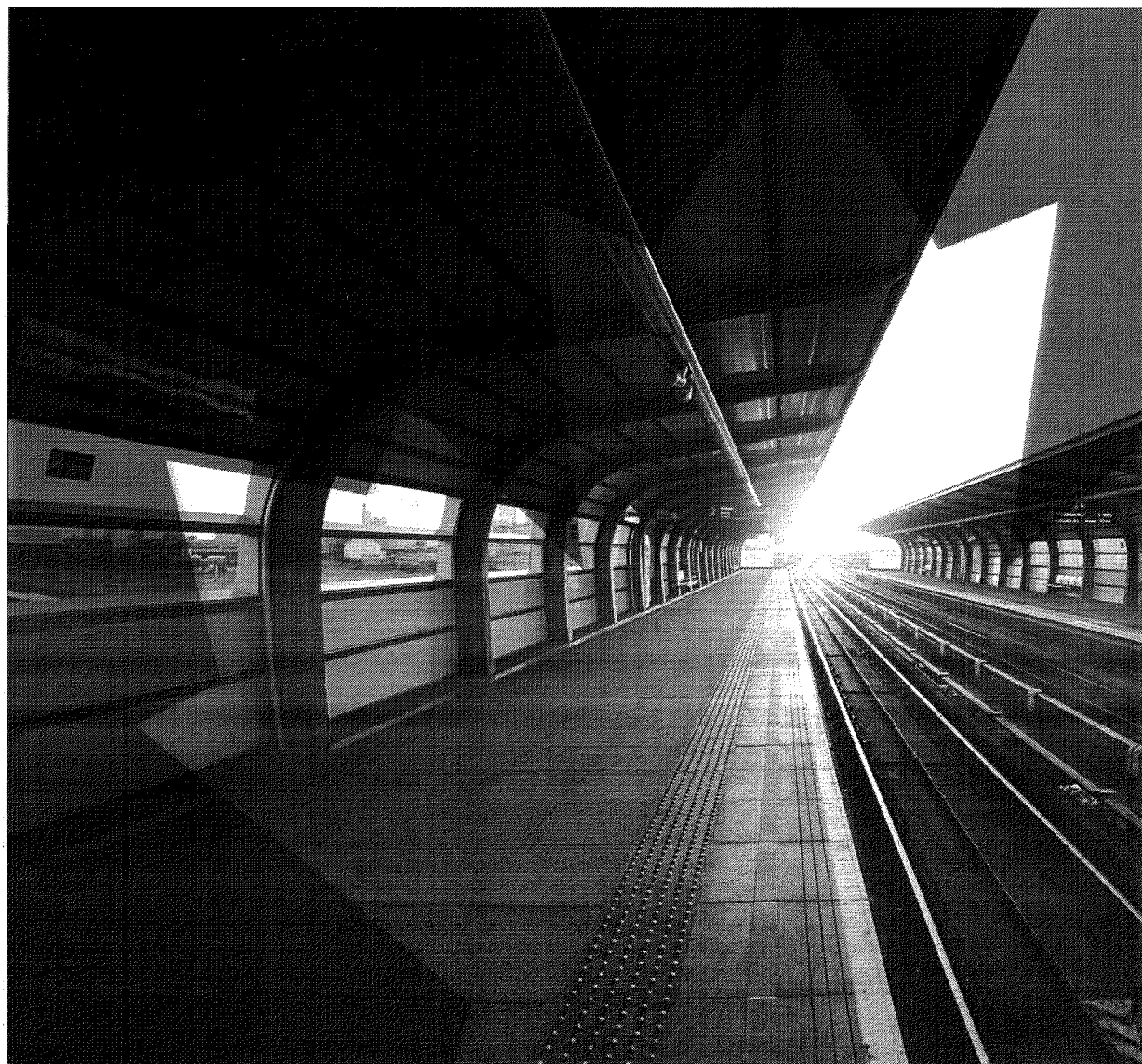


Canada Infrastructure Bank High-level Project Flow

January 2018



Canada Infrastructure Bank
Transition Office





- Mandate & Functions
- Business Lines
- Project Criteria – Public Interest and Bankability
- Project Sources
- Project Flow
- Accountability Cycle



\$35B

The Bank will **invest \$35 billion** alongside the private sector, including but not limited to:



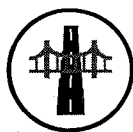
\$5B

Public Transit



\$5B

Green
Infrastructure



\$5B

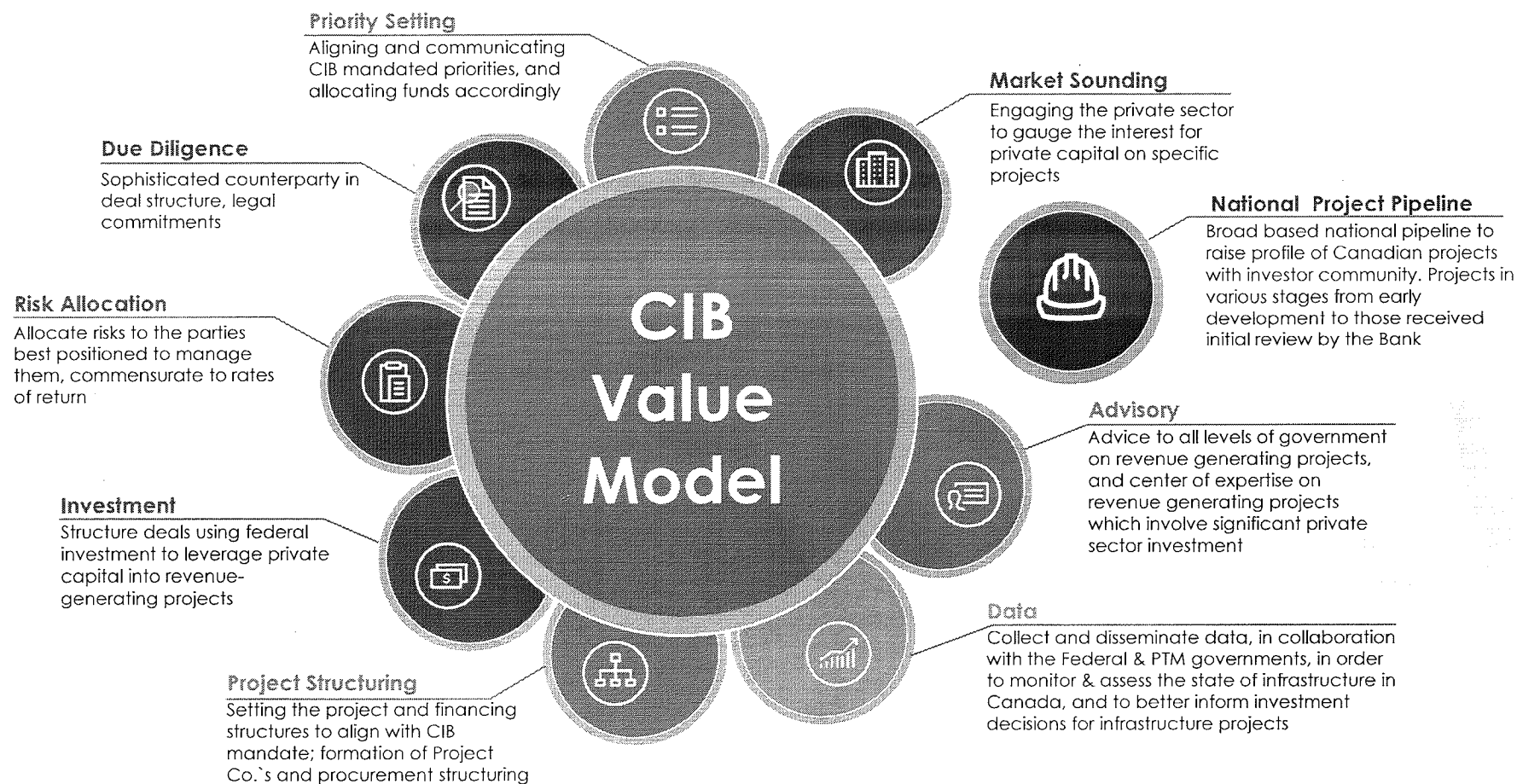
Trade &
Transportation

"The purpose of the bank is to invest, and seek to attract investment from private sector investors and institutional investors, in infrastructure projects in Canada or partly in Canada that will generate revenue and that will be in the public interest"

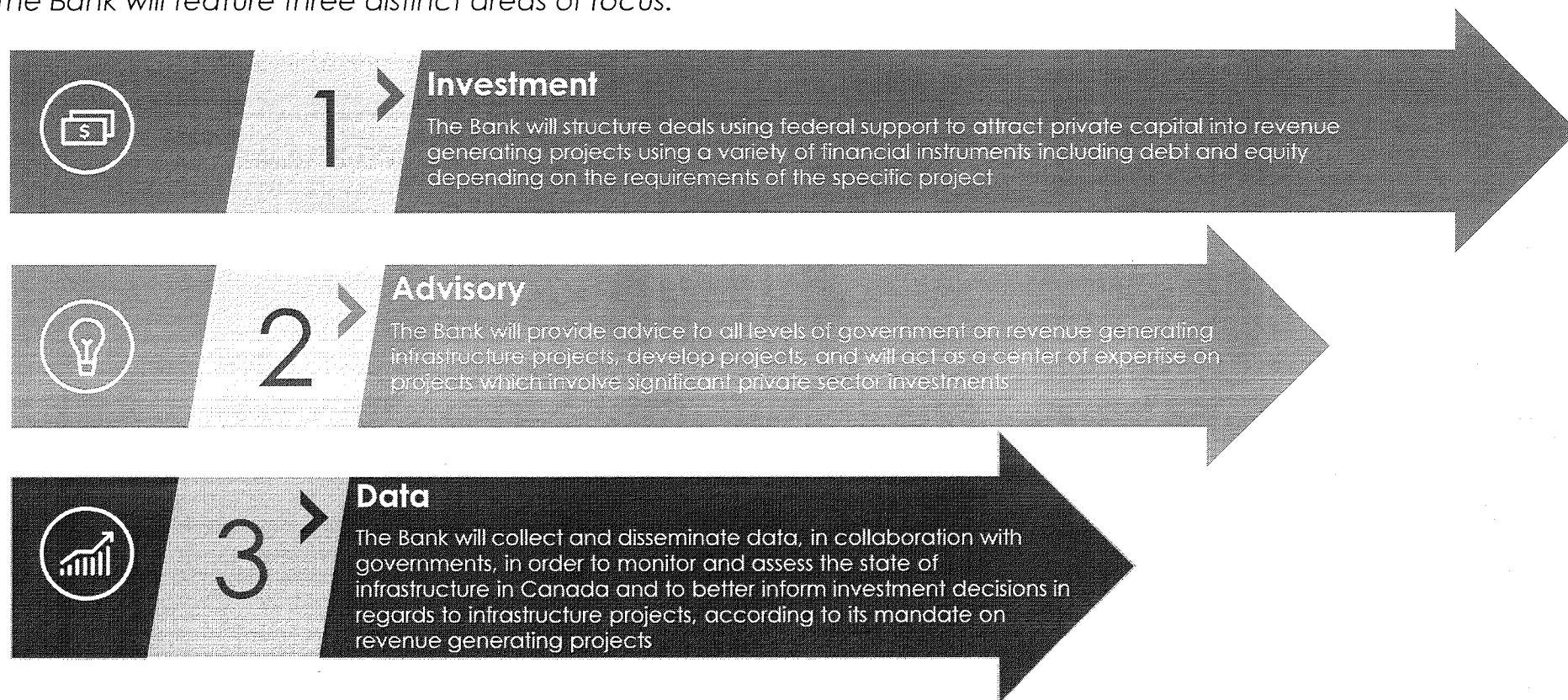
– *Canada Infrastructure Bank Act*

"The Canada Infrastructure Bank will be responsible for investing at least \$35 billion over 11 years, using loans, loan guarantees and equity investments. These investments will be made strategically, with a focus on **large, transformative projects such as regional transit plans, transportation networks and electricity grid interconnections**"

– Budget 2017



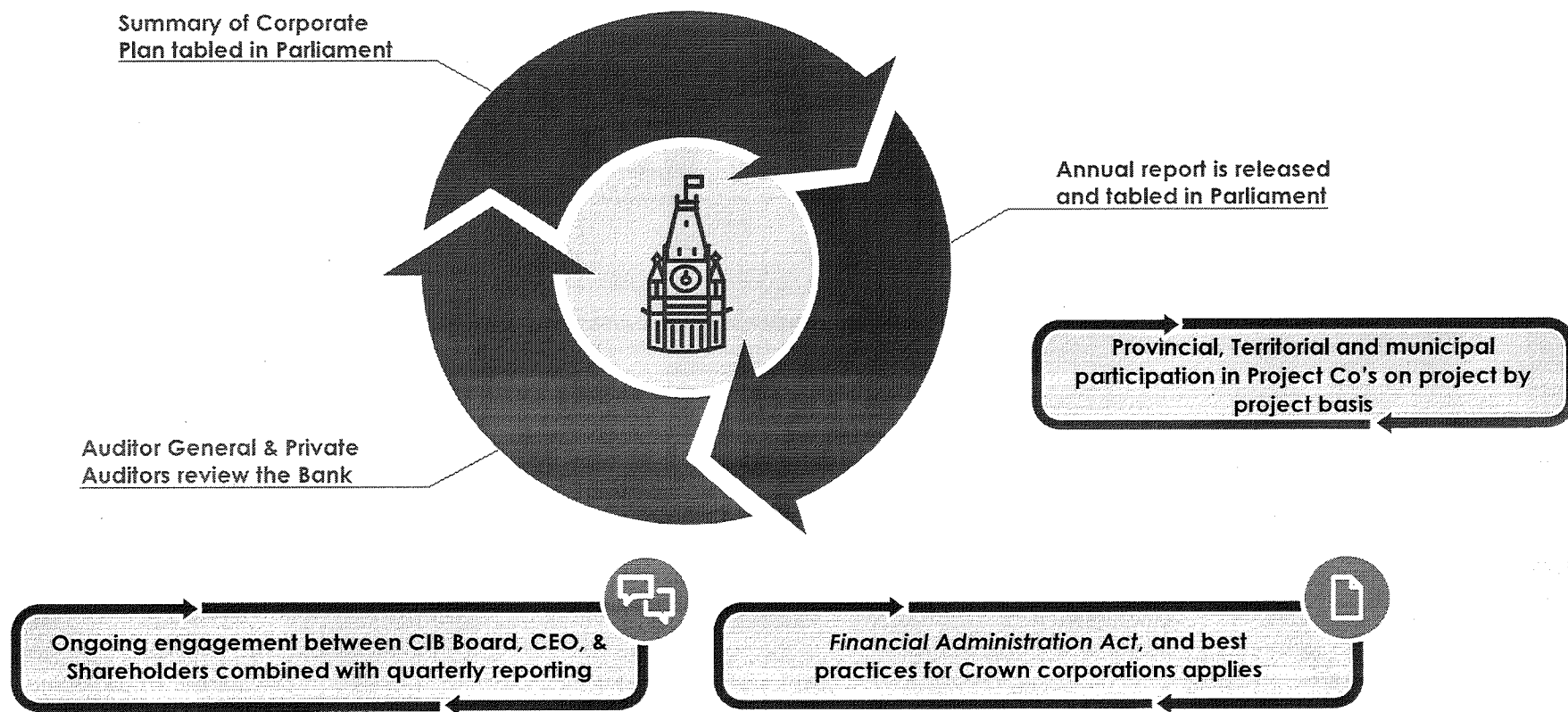
The Bank will feature three distinct areas of focus:



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of the *Access to Information Act***

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21(1)(a)
de la loi sur l'accès à l'information**

Accountability Cycle



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Canada Infrastructure Bank: A New Partnership To Invest in Infrastructure



Department of Finance
Canada

Ministère des Finances
Canada



Infrastructure
Canada

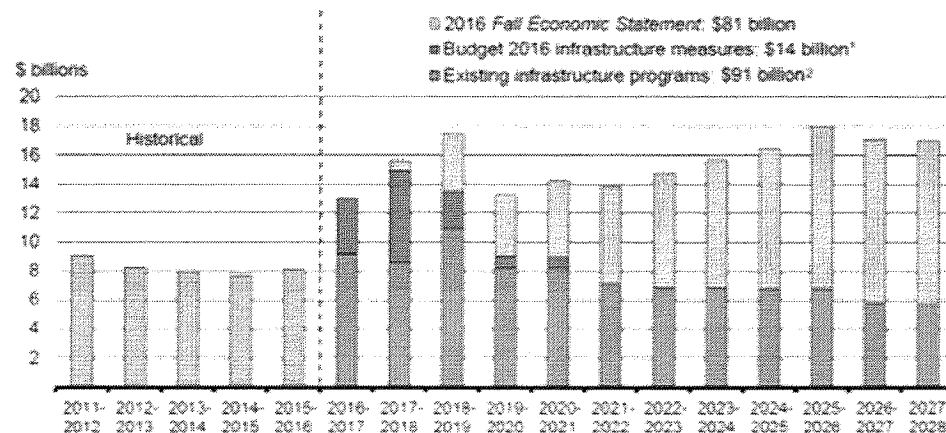
Canada

Government's Long-term Infrastructure Plan

- Over \$180 billion of federal spending for infrastructure across the country over 12 years
- Priorities include:
 - Public Transit
 - Green Infrastructure
 - Social Infrastructure
 - Trade and Transportation
 - Rural and Northern Communities
- Federal support through the Canada Infrastructure Bank represents \$15 billion of the \$180 billion

- The Bank will be provided up to \$35 billion for investments, and can incur \$15 billion in accrual expenses

Long-Term Infrastructure Plan



¹ Includes Phase 1 (\$21.9 billion) strategic investments in port/seaports, infrastructure (\$2.0 billion) and rural broadband (\$600 million) and Phase 2 (\$1.1 billion) investments.

² Includes Infrastructure Canada programs, Indigenous infrastructure programs and social infrastructure programs.

Canada Infrastructure Bank – Context

- There is an infrastructure gap in need of bridging
 - Estimates range from as “low” as \$150 billion to as high as \$1 trillion
(Source: Advisory Council on Economic Growth)
- Bridging the national infrastructure gap through public finances alone would place an unsustainable burden on taxpayers
- There is an abundance of institutional capital seeking stable, long-term and predictable returns
 - Institutional investors such as pension funds and sovereign wealth funds have over \$1.7 trillion available for the infrastructure asset class, while other private investors are increasing investments in infrastructure
(Source: Advisory Council on Economic Growth)
- Increasing the participation of institutional capital will allow the government to invest more in projects that address social and environmental needs

The Role of Private Capital

Pure Public

Pure public good that is publicly funded, operated and maintained

PPP

Private financing, operations and maintenance backed by government availability payments

CIB

Private/Public funding to various degrees

Pure Private Funding

Private capital, private and public use

■ Examples

- School
- Water Treatment Facility
- Toll Bridge
- Pipelines

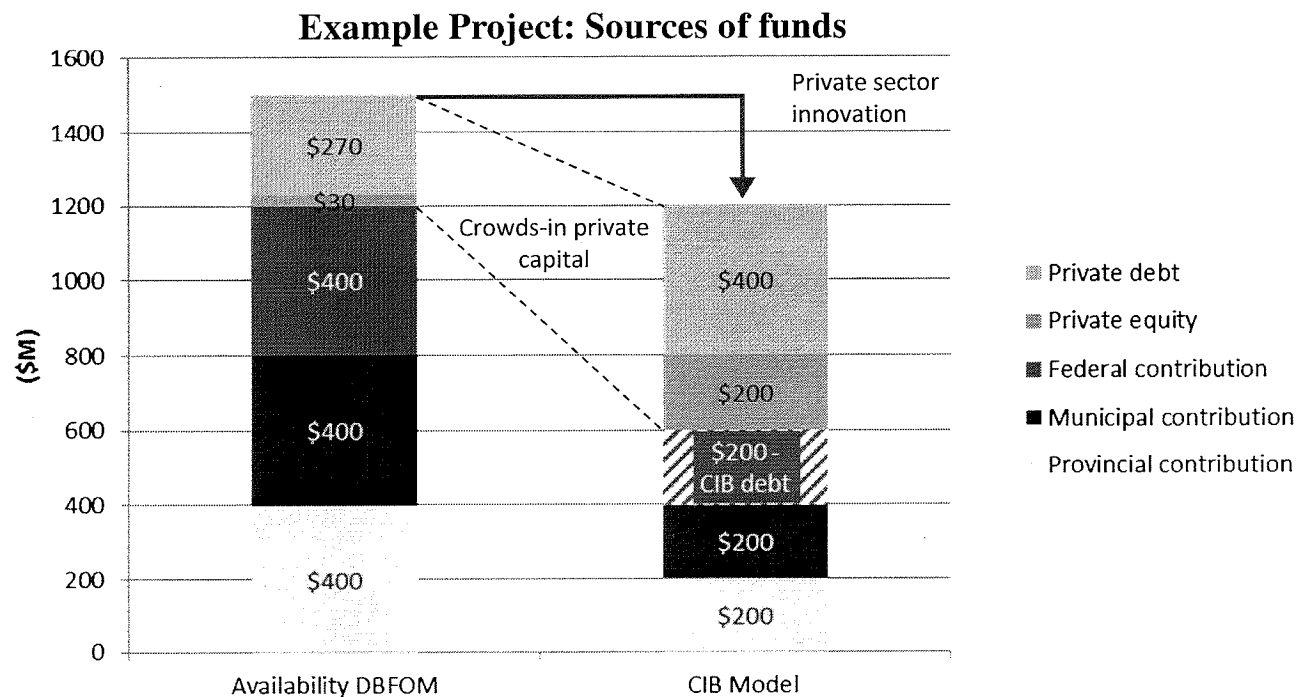
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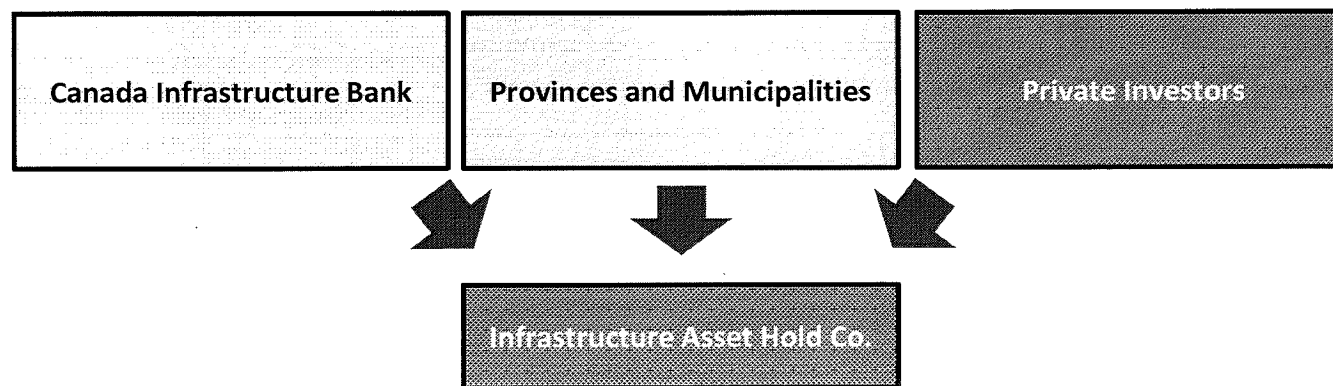
What can Canada Infrastructure Bank support help achieve?

- Concessionary federal investment to an infrastructure project's capital structure, alongside pricing, to crowd-in private capital
- Private investors bring innovative solutions to build infrastructure at the right size and cost
- CIB supported capital structure can free up public dollars making more projects viable

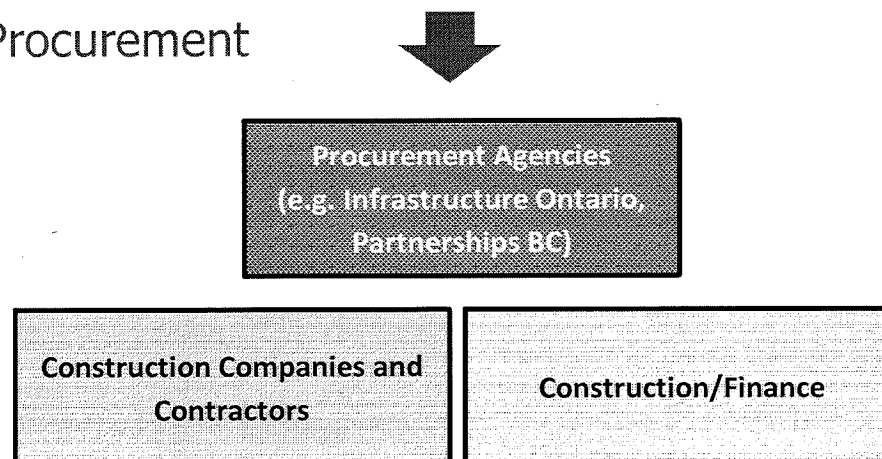


The Canada Infrastructure Bank in Context

- Infrastructure Asset Owners and Providers of Capital



- Infrastructure Procurement



Canada Infrastructure Bank – Key Functions

- The Canada Infrastructure Bank will:
 - Work with project proponents (e.g. municipality) to structure, negotiate and deliver federal support for infrastructure projects with revenue generating potential
 - Attract private sector capital to infrastructure projects that are in the public interest
 - Serve as a single point of contact for unsolicited proposals from the private sector
 - Where needed, advise governments on capitalization of revenue generating infrastructure projects
 - Improve the state of infrastructure data
- The CIB will use a wide breadth of financial instruments:
 - Debt (e.g., loans, loan guarantees), both unsubordinated and subordinated
 - Equity investments
 - A hybrid of the above

CIB capital and expertise will be used strategically to crowd-in private investment. Public dollars will go further and enable more infrastructure to be built.

Key Benefits

- Bringing private capital to infrastructure ownership, where feasible, keeps public funding where it is needed most
- Reduces fiscal pressure on governments at all levels for managing their infrastructure
 - Capital costs, operating and revenue risks are shared with private investors
 - Full lifecycle costs of assets will be factored into design and financing structures
- A way to bring private capital to large-scale, unfunded projects that are part of integrated capital plans
 - E.g. Transit, toll roads and bridges, clean electricity distribution
- The tools necessary to develop world-class projects that attract private sector capital:
 - Advice and expertise to enable negotiations with large, sophisticated institutional investors
 - Arm's length decision-making

How will it work?

- Project proposals and priorities (e.g. infrastructure need) generated by provinces, territories, municipalities and federal government departments
 - Federal policy direction established by Ministers: Canada Transportation Act Review, Pan-Canadian Framework, Budget 2017, etc.
- Unsolicited proposals from the private sector are also submitted to the CIB
- Touch points with the Government of Canada to ensure public interest elements (e.g. Corporate Plan process)
- CIB develops and maintains a national pipeline of projects (or priorities) eligible for federal support
 - The project pipeline will comprise all projects that meet the initial public benefit triage and for which the proponent has signalled an interest to involve private capital.

How will it work? (cont.)

- CIB reviews pipeline to determine potential for revenue generation and private investment
- The CIB will work with proponents to develop an investment structure involving private sector investors. This will include:
 - Seeking input from private sector actors
 - Demonstrating expected value for money relative to the standard procurement approach and risk trade-offs ("pricing support")
 - Committing to financing support to improve the viability of revenue based projects
 - Sharing relevant project expertise and knowledge base

Governance

- Enabling legislation for the CIB has been tabled as part of the Budget Implementation Act
 - The Bank will be led by a Chief Executive Officer and governed by a Board of Directors
 - The Bank will be structured as an arm's length Crown corporation accountable to Parliament through its responsible Minister
 - The Bank will seek Government's approval of its Corporate Plan annually, and table a summary of the plan in Parliament.

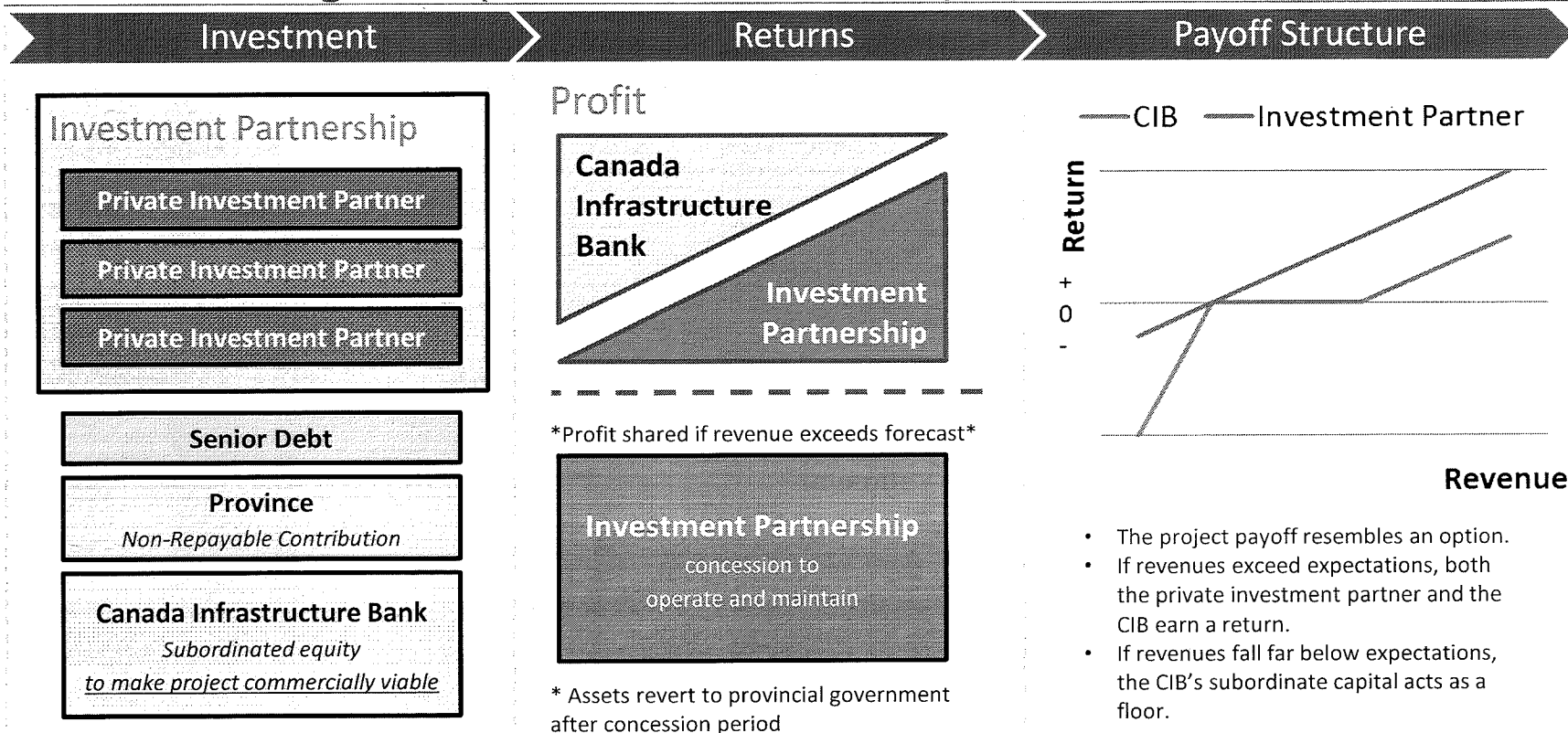
Next Steps/Implementation Plan

- The CIB Transition Office, established earlier this year at Infrastructure Canada, is leading on CIB implementation activities
- The Government is moving quickly to incorporate the CIB
 - Enabling legislation tabled as part of the Budget Implementation Act
 - Head office to be located in Toronto
 - Competitive process underway to select the Chair of the Board of Directors, a professional Board, and the Chief Executive Officer
 - Early engagement with jurisdictions and investors to prompt consideration of projects for CIB investments
- Canada Infrastructure Bank to be operational in late 2017
 - The CIB will then begin accepting project applications, with investment decisions being made shortly thereafter



Appendix

CIB Financing Example – Subordinated Equity

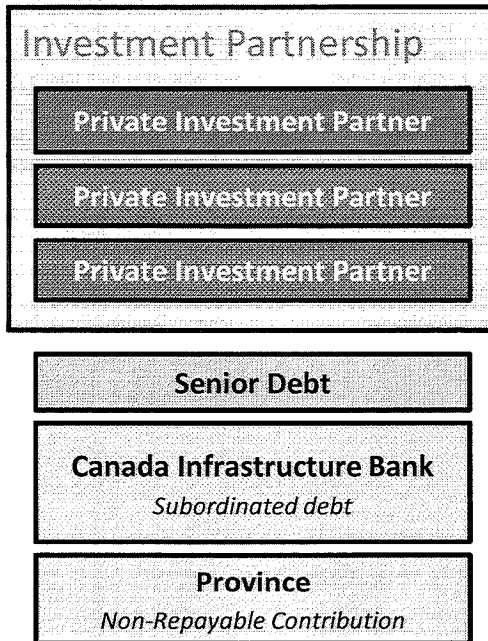


- The CIB will make investments in revenue-generating infrastructure through direct investments, repayable contributions, debt and equity.
- Possible projects could include, but are not limited to: regional express rail networks, intercity rail, municipal transit, toll roads and bridges.
- These various projects will have deal structures that resemble the example above but with variations in sub-sovereign contributions to reflect asset ownership (e.g. municipal contribution in transit)

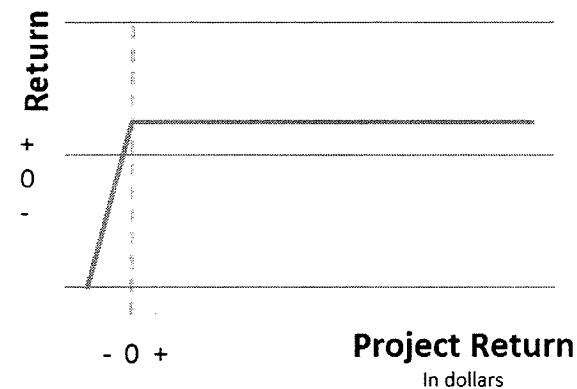
CIB Financing Example – CIB Low Cost Debt

Investment

Payoff Structure



CIB Return



- In addition to investments where the CIB shares in profits which exceed forecasts, the CIB will provide low-cost, subordinated lending facilities when appropriate



Canada Infrastructure Bank: Benefits for Canadians

DRAFT: Not for public use



Department of Finance
Canada

Ministère des Finances
Canada



Infrastructure
Canada

Canada

Infrastructure

- Infrastructure supports the daily activities of Canadians; improves quality of life; and enhances social cohesion
 - This infrastructure includes transit, water and wastewater systems, recreational, social and community facilities like parks, schools and hospitals
- Infrastructure also supports economic activity; is a significant driver of productivity; and is a platform for growth
 - This includes trade and transportation, electricity transmission and distribution systems
- Our infrastructure is funded by all levels of government
- Some infrastructure systems – such as electricity, water, wastewater, transit, some highways and bridges – are supported through user fees

The Need for Infrastructure

- Canada faces a significant public infrastructure deficit

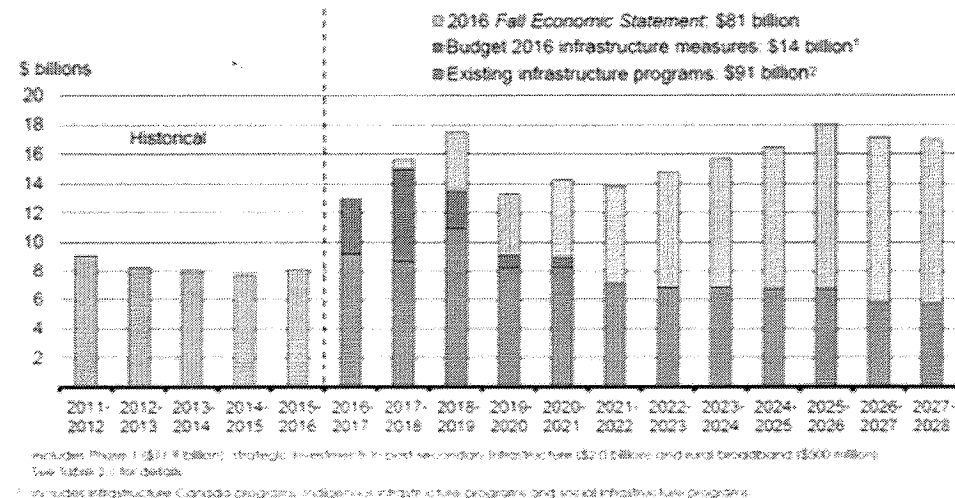
According to the Canadian Chamber of Commerce, Canada faces a \$570 billion infrastructure gap, but estimates vary and can go as high as \$1 trillion

- Meeting Canada's infrastructure needs places significant fiscal pressure on all governments
 - Filling the gap will require new solutions and new partnerships
- Some infrastructure can be funded by private investors
 - Mobilizing private capital to support infrastructure projects reduces pressure on government finances
- Such an approach would allow government spending to focus on other priorities that can improve the lives of Canadians

The Government's Long-term Infrastructure Plan

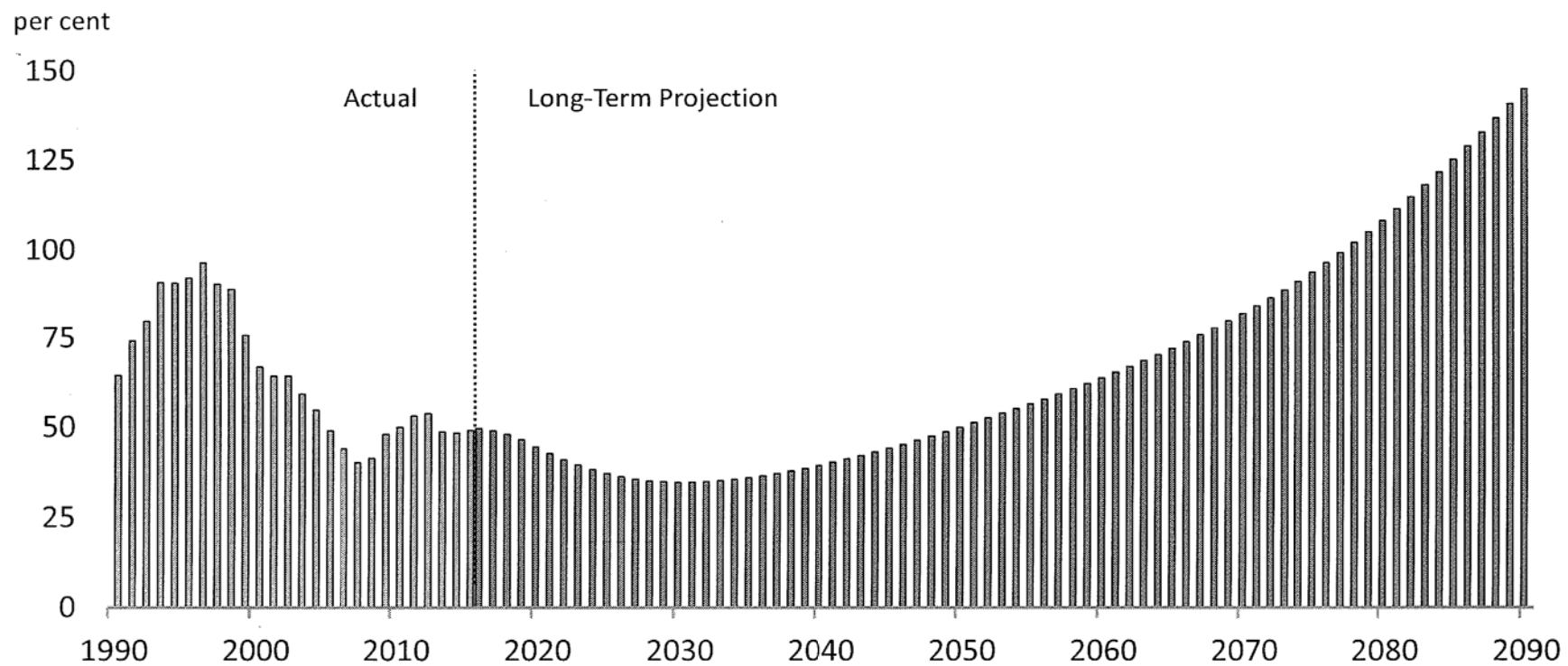
- The long-term infrastructure plan includes over \$180 billion of federal spending for infrastructure across the country over 12 years
- Infrastructure plan priorities include:
 - Public Transit
 - Green Infrastructure
 - Social Infrastructure
 - Trade and Transportation
 - Rural and Northern Communities
- Federal support will be primarily delivered through contribution agreements with provinces
- Support delivered through the Canada Infrastructure Bank represents \$15 billion of the \$180 billion plan

Long-Term Infrastructure Plan



DRAFT: Not for public use

Total Government Net Debt-to-GDP Ratio



Source: PBO Fiscal Sustainability Report 2016 and Statistics Canada.

Addressing the infrastructure gap requires new solutions

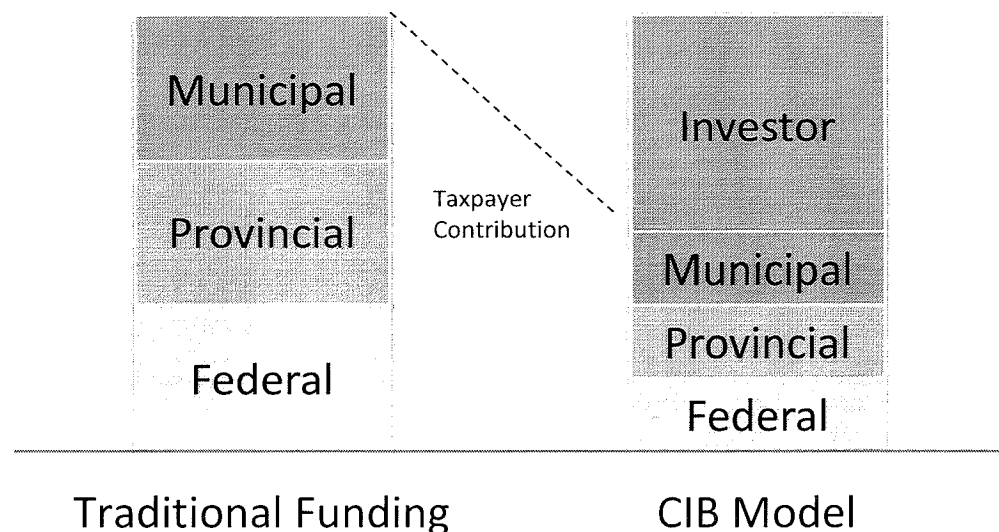
The Canada Infrastructure Bank will partner with the private sector to bring about transformative projects that would otherwise not be feasible because of their prohibitive cost, risk profile or limited revenue-generating potential

- The CIB will provide an additional option for federal, provincial, territorial, and municipal project sponsors to advance projects
- Provinces, territories and municipalities will only choose to use the CIB when they see clear benefits
- The proposed mandate of the CIB is:
 - To make investments in revenue-generating infrastructure projects that are in the public interest; and
 - Seek to attract investment from private sector and institutional investors to those types of projects

The CIB will reduce the cost of meeting infrastructure needs

- By bringing in private sector investors, up front capital contributions and long-term operating costs are reduced for all levels of government
- This releases resources for projects that can only be completed with public funding
- The result is more infrastructure getting built
- CIB-supported projects will provide a greater role for the private sector than P3 models
- The CIB will leverage private sector expertise to drive public benefits

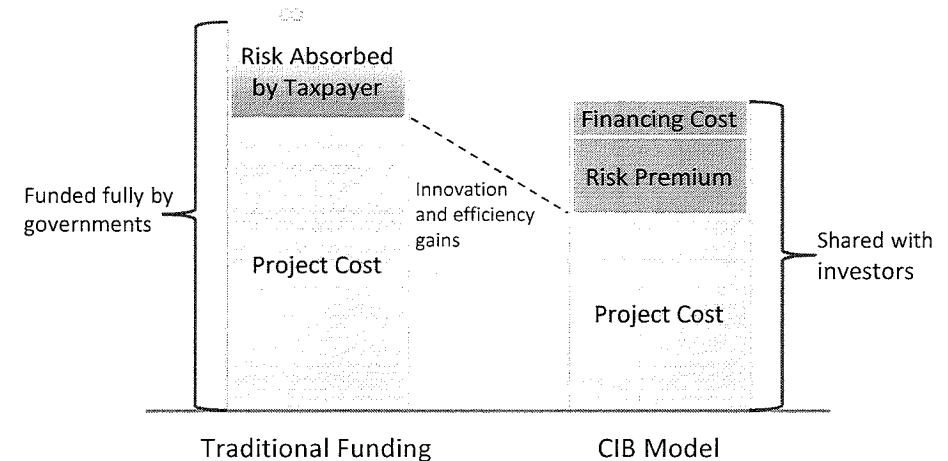
Infrastructure Funding Sources



The CIB will catalyse more and better infrastructure

■ Well structured partnerships with the private sector will result in:

- Innovation in design
- Right-sized, cost-effective projects
- Condensed construction schedules
- Better performing infrastructure that is durable



■ These outcomes are driven by:

- Private sector partners need to control costs and meet schedules in order to deliver timely returns to investors
- As investors and other infrastructure firms enter the marketplace, competition generates new ideas and has the potential to reduce costs
- As investors are engaged in projects for the long term, they will consider the complete life cycle of the infrastructure, leading to more durable infrastructure
- Investors seeking to optimize investments will only direct capital to a level of infrastructure that is justified by demand, thus leading to 'right-sized' projects

¹ *Global Infrastructure Investment: The role of private capital in the delivery of essential assets and services, 2017*

The CIB will catalyse more and better infrastructure

- There are benefits to introducing user pricing to the right infrastructure
 - Better information about infrastructure usage
 - Improved urban planning and asset management
 - Reduced demand for infrastructure
 - Less traffic congestion
 - Reduced consumption of vital resources (e.g., water)
 - Lower GHG emissions
 - Improved service delivery
 - More attractive cities for residents and businesses
 - Supports trade and economic growth

Water and Electricity in the U.K.

PwC¹ found the inclusion of specialist investors in UK infrastructure led to:

- Annual reduction in water leakage of 13%
- Reduction in electricity supply interruptions by 29% and reduced average length of outage by 39%
- Greater investment by operators

- CIB capital and expertise will be used strategically to attract private investment
 - The CIB will only seek private capital when it will bring additional value to the project
 - Public dollars will go further and enable more infrastructure to be built

¹ *Global Infrastructure Investment: The role of private capital in the delivery of essential assets and services, 2017*

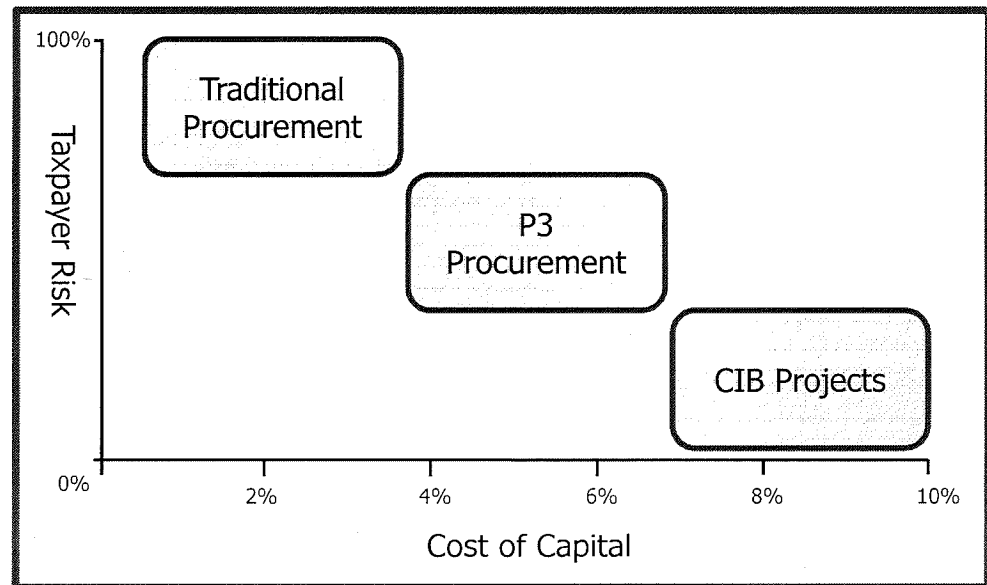
Governments can reduce their costs and risks by working with private sector investors

■ Traditional procurement

- Funded through government contribution programs
- Places all risk and cost associated with the project on governments
- Since the taxpayer takes on all risk, there is greater uncertainty in the project's lifecycle cost

■ P3 projects

- Funded through government contribution programs
- Involve the sharing of risk between investors and governments
- In a P3 arrangement, most of the project cost remains the responsibility of governments
- Since some risk has been transferred, there is greater certainty in the cost of the project over its lifecycle



■ CIB projects

- Funded by investor, CIB and government contributions
- Involve an increased transfer of risk to investors, compared to a P3 arrangement (e.g. volume, business model)
- Provide the lowest cost to government to build a project

Addressing the infrastructure gap requires new solutions

- The CIB will invest \$35 billion in projects and can incur \$15 billion in accrual expenses. \$15 billion is the maximum fiscal impact over a 12-year horizon.
- The CIB will be an arm's-length Crown corporation accountable to Parliament.
 - Balance government oversight with infrastructure investment expertise
 - The Government will be responsible for setting the overall policy direction and high-level investment priorities
 - A summary of the corporate plan and annual report will be tabled annually in Parliament
 - Governance framework is broadly in alignment with other federal Crown corporations that leverage the private sector to support public priorities (EDC, BDC)
- The CIB will use a range of financial instruments, depending on what makes sense for the project

Infrastructure investment is a cornerstone of the government's growth strategy and the proposed Canada Infrastructure Bank will be an effective instrument in achieving this goal. -IMF 2017 Article IV Mission Concluding Statement